



View of Herscher Dome field points up huge growth of underground storage

THE great majority of gas industry people look forward to an industry working as a team from the time gas is discovered deep in the earth until its final utilization in a household or industrial burner. For these people nothing in recent weeks has been as encouraging as the Natural Gas Legal Symposium held in New York last month. Here were gathered representatives from every branch of the industry and spokesmen for both federal and state regulatory bodies. Despite the name, no dusty or fusty legalities were pulled out of an old hat. Instead, informed men spoke frankly and openly of the problems that divide the industry; they raised the demands of their own particular interests, and opposed those ideas they held harmful or short-sighted. . . . Before you turn to page 9 for a more detailed report on this meeting, let us assure you that no solutions were found, no broad program of unity was accepted. But what is encouraging and hopeful is that these divisive problems were discussed with open minds and with a realization on all sides that any solution must be fair to all segments of the industry and to the ultimate consumer who meets the bills. . . . Like kitchens? You'll see some of the best yet on pages 18-19. United Gas Corporation has filled a building with all-gas kitchens where they can be seen the year around. Site: Louisiana State Fairgrounds.

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STRAWS *in the wind*

● *A report in brief
on industry trends and activities*

AT HALF-WAY MARK

The drive for the gas industry national television show was almost at the half-way mark by the end of April. The goal is \$2,000,000 pledged by participating gas companies. The long-sought dream of "a big TV show for a big industry" is at last nearing reality.

EYES ON WEATHER

Probing the relationship of sun and weather is a task set by the newly-formed Institute for Solar-Terrestrial Research. Operating at Colorado University's High Altitude Observatory, the institute has embarked on a four-year study which will seek increased accuracy in long-range weather forecasts. The gas industry's PAR Program is one of the sponsors.

COAL INTO GAS

Another research program affecting the gas industry is sought by the Bureau of Mines. Its goal is an integrated coal research set-up embracing both private and public agencies, including gas interests. Eventually turning coal into pipeline gas would be one of the objectives.

TESTING AN IDEA

Transportation of natural gas by barge has moved from the idea stage to practical tests. A barge of special design floats on a Louisiana coastal bayou, filled with liquefied gas at a temperature of -285°F . An API subcommittee met in Washington to help write governmental standards for moving liquefied natural gas in ocean-going commerce.

KITCHENS ON WHEELS

A New Freedom Gas Kitchen and Laundry Train, consisting of five cars holding ten magazine-designed kitchens and laundries, is being considered by gas companies as a possible major promotion. The train would tour the country throughout 1957, with three-day stands under local sponsorship. Acceptance of plan is required by a minimum of 100 cities.

KITCHEN OF THE FUTURE

A leading designer has been engaged to work on "the gas kitchen of the future." Envisaged is a core unit. Actual design of the unit (in collaboration with A. G. A. Laboratories) will not begin until its financial practicality and acceptance by home builders is established.

ONE DOWN, FOUR TO GO

With the first 1956 regional public relations workshop getting underway in Omaha as we go to press, A. G. A. Public Information Bureau plans four more before Atlantic City convention time. Held in cooperation and consultation with regional associations, these workshops are designed to aid working PR people in coping with their problems at the grass roots level.

NEW ANIMATED DISPLAY

Automatic top burner heat control will be featured in next fall's Old Stove Round-up's animated display. With more and more manufacturers using the new development, the display will be widely used in individualized versions. Gas company response has been enthusiastic, with one utility ordering 2,000 displays.

ANOTHER KITCHEN ON TV

An all-gas kitchen has been placed in a new TV film show to appear for 39 weeks over CBS-TV. A family situation series, the Four-Star Production stars Ida Lupino and Howard Duff as the married couple—as they are in real life. Our Hollywood Bureau says the kitchen will appear in most of the shows.

SPACE HEATING SURGES

From 68,000 space heating customers in 1950 to 213,000 by May 31 is the record growth achieved in Chicago by The Peoples Gas Light and Coke Company. Reporting to stockholders, President James F. Oates Jr. said that by 1960 the gas company hopes to be heating another 150,000 single family dwellings.

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ISSUE

Edwin L. Hall, 1902-1956



Edwin L. Hall, director of the American Gas Association Laboratories in Cleveland and Los Angeles and an assistant managing director of the Association, died suddenly at his home in Cleveland, Ohio, April 1 at the age of 53.

An internationally-known authority on gas manufacturing and gas appliances, Mr. Hall held more than 25 patents on gas-making processes. In 1950, he was presented the A. G. A. Distinguished Service Award, the highest honor bestowed by the Association, for having made the most outstanding contribution of any individual toward the advancement of the gas industry.

He was cited for his original contribution in the development of equipment and processes for the manufacture of high Btu gas. Mr. Hall developed and gave to the gas industry a new process for the manufacture of gas of high heat content from inexpensive, low-grade oils. Through his process, manufactured gas companies were able to increase production and effect savings of as much as 30 per cent in the cost of manufacturing gas at a time when expansion plans of the industry were greatly hampered by shortages of steel and other vital materials.

Also, in 1952, Mr. Hall was awarded the Walton Clark Medal by the Franklin Institute of Philadelphia. He was cited for "his many contributions to the gas industry."

Mr. Hall's death came on the eve of the Eleventh Annual A. G. A. Research and Utilization Conference in Cleveland. Chester S. Stackpole, managing director of A. G. A., told the more than 500 delegates at the meeting

that "Ed Hall was one of the best loved and most respected men in the industry."

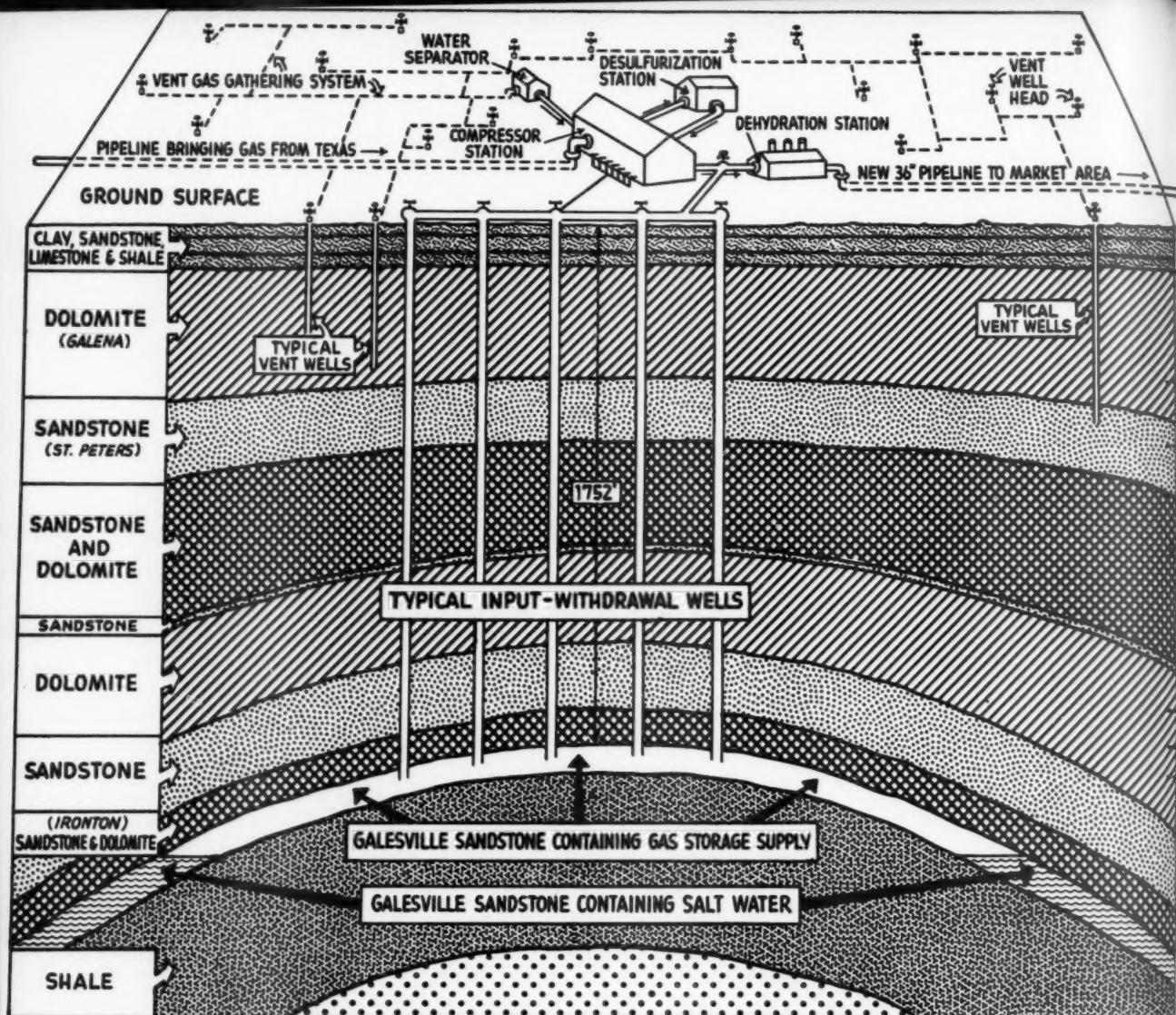
"He was possessed of many rare qualities," Mr. Stackpole said, "a genius in his own right; capable beyond most in his chosen technical profession and in the field of administration. His never-ending willingness to do for others 'above and beyond the call of duty' made him loved by all who knew him and worked with him. We will all miss him more than words can express, but," he told the gas men, "Ed Hall would be happiest to know that you are carrying on the research work which was so close to his heart."

Mr. Hall spent an illustrious professional career entirely in the gas industry. He was graduated from Ohio State University in 1924, with a bachelor of metallurgical engineering degree. He began his service in the gas industry as a cadet engineer for the United Gas Improvement Company at the Philadelphia Gas Works Company. Later, in 1924, he was transferred to Syracuse Lighting Company

(Continued on page 34)

Hodgdon succeeds Hall

Frank E. Hodgdon, assistant director of A. G. A. Laboratories, has been named director, effective May 1. The appointment was made by the Board of Directors at its meeting on April 26 in Dallas. A more complete report will be carried in our June issue.—Editor.



Schematic cross-section of Herscher Dome illustrates typical aspects of underground storage

Gas in storage reaches new peak

Total storage reservoir of the gas industry passed the two billion mcf mark during 1955, according to the American Gas Association's fifth annual statistical report on underground storage in the United States.

This ultimate capacity, which includes all native gas remaining in the

reservoirs when storage operations were started, reached a total of 2,095,814,139 mcf in 1955. This was an increase of 237 million mcf over 1954. Since these statistics were first gathered in 1951, the total ultimate capacity has increased 1,180,000,000 mcf.

Maximum gas in storage, which

represents the highest balance of total input over total output of gas in storage, stood at 1,150,000,000 mcf on October 31, 1955, an increase of 139,000,000 mcf over 1954. The increase since 1951 in this category was 603 million mcf.

The annual report was prepared for

the A. G. A. Committee on Underground Storage by its Subcommittee on Statistics. The committee is headed by John B. Corrin, Hope Natural Gas Company. Chairman of the subcommittee is H. L. Fruechtenicht, Michigan Gas Storage Company.

Facilities for underground storage represent a total investment of approximately \$377,000,000, the committee estimates. This includes all physical properties and cushion gas.

Both total output and input for year ending October 31 increased in 1955. The total output was 352 million mcf, an increase of 48 million mcf over the previous year and was 152 million mcf over 1951. The total input to storage for the year 1955 was 503 million mcf, an increase of 71 million mcf over the previous year. The increase in input over the year 1951 was 165 million mcf.

The maximum day output for 1955 was 6,483,000 mcf. This is equivalent to approximately six systems of a million mcf per day capacity. The increase over the previous year was 919,000 mcf and for the five year period 1951 to 1955 it was 3,242,000 mcf.

At the end of 1955 there was a total of 178 storage pools with 6,746 active wells. Of these 178 pools, five were aquifer fields. Ten storage pools were under construction.

One hundred and twenty-four compressor stations provided 348,000 horsepower available for storage in 1955. This is an increase of 48,000 horsepower over the previous year.

Pennsylvania, West Virginia, Ohio and Michigan are still the four states in which most of the storage operations are carried on. Pennsylvania has taken the lead again in all the phases of storage operations with the other three close behind.

These four states had a total of nearly 271 million mcf in outputs for the year ending October 31st or about 76 per cent of the total outputs for all of the states. Pennsylvania alone had nearly 100 million mcf outputs.

The four leading states had nearly 68 per cent of the maximum day output of all the states. The leader, Pennsylvania, had more than 1.5 million mcf output for one day.

The committee expressed its appreciation to the companies and their personnel which supplied the data upon which the report was based.

GROWTH OF UNDERGROUND STORAGE IN UNITED STATES

Year	No. Pools	No. States	Est. Total Reservoir Capacity (Cubic Feet)
1944 (a)	50	11	135 Billion
1947 (b)	70	11	250 Billion
1949 (c)	80	11	497 Billion
1950	125	15	774 Billion
1951	142	15	916 Billion
1952	151	16	1,292 Billion
1953	167	17	1,735 Billion
1954	172	17	1,859 Billion
1955	178	18	2,096 Billion

Sources:

- (a) E. G. Dahlgren—API Eastern District Meeting, Columbus, Ohio.
- (b) E. G. Dahlgren—A. G. A. National Gas Department, Chicago, Illinois.
- (c) Max W. Ball—A. G. A. National Gas Department, French Lick, Indiana.

SUMMARY OF PERTINENT DATA CONTAINED IN REPORT 1953-1955

	1953	1954	1955
Number of States	17	17	18
Number of Companies	37	40	44
Number of Pools	167	172	178
Number of Active Wells	5,789	6,395	6,746
Number of Compressing Stations	102	115	124
Total Horsepower of Compressing Stations	271,437	300,940	347,835
Maximum Gas in Storage—MCF	889,137,531	1,011,334,832	1,150,246,421
Gas in Storage as of October 31—MCF	883,504,723	996,513,919	1,136,127,854
Input to Storage for Year Ending October 31—MCF	403,304,107	432,271,309	502,632,586
Output from Storage for Year Ending October 31—MCF	232,558,971	304,205,104	352,000,097
Maximum Day Output for Year Ending October 31—MCF	4,213,381	5,564,176	6,482,950
Ultimate Reservoir Capacity—MCF	1,735,815,180	1,859,398,026	2,095,814,139
Number of New Pools Under Construction	12	12	10
Estimated Ultimate Capacity of New Pools—MCF	314,579,000	180,480,000	81,712,480

TOTAL NUMBER OF COMPRESSING STATIONS AVAILABLE FOR UNDERGROUND STORAGE OPERATIONS

Input Only	22	29	30
Both Operations	68	73	81
Output Only	12	13	13
Total	102	115	124

Charts from 1955 Report of the Subcommittee on Statistics of the A. G. A. Underground Storage Committee.

Gas engineers hear of latest developments in research, utilization at Cleveland conference

Research speeds new ways for air conditioning

Gas men attending the 11th Annual Research and Utilization Conference April 3-4 in Cleveland, Ohio, were told that gas air conditioning research has reached "the first plateau."

Ronald A. Malony, president, The Bridgeport (Conn.) Gas Light Co., in his keynote address said that although there are problems to be met before gas air-conditioning becomes "a slick household package," it is a bright spot in the near future of the industry.

"The stimulating effect of our research program," he said, "is beginning to serve its purpose as a catalyst influencing private research among companies closely allied with our own business. We and our friends are literally embarking on a million dollar plus gas air conditioning research venture."

"One company alone," he pointed out, "has appropriated half a million recently in joining the parade. We expect that at Atlantic City this October we will send the delegates home . . . convinced that gas air conditioning has reached what a television program calls 'the first plateau'."

He went on to say that "we have constructed a solid framework of organizing for research" but added that it still needs "only expansion and a sense of urgency."

Mr. Malony set the tempo of the meeting by urging industry-wide agreement on these propositions: "That today no industry, including our own, can continue to grow without fundamental and applied research; that we have the teamwork and organization to implement a good research program

and that more to the immediate point, each of us will leave this conference feeling that we have made a contribution that will help somebody, and in turn, feel that we have been richly rewarded."

The more than 500 gas men attending the conference—the largest count ever—also heard discussions on technical advances on incineration and on the latest developments in domestic gas range designs.

F. W. Batten, vice-president and general manager, The Manufacturers Light and Heat Co., Pittsburgh, was chairman of the conference. Presiding at the opening session, Mr. Batten introduced the keynote speaker along with Charles B. Gamble, Jr., vice-president of engineering, Alabama Gas Corp., Birmingham, who spoke on



Prominent participants in research-utilization conference are (l. to r.) Dr. E. Vandaveer, East Ohio Gas; R. A. Malony, Bridgeport Gas; C. B. Gamble, Alabama Gas; conference chairman F. W. Batten; Ira Rapson, Michigan Consolidated Gas; and H.



Luncheon speakers C. S. Stackpole (left), A. G. A. managing director, and panelist Robert Luoma, GAMA technical director, chat with Chairman F. W. Batten (center). Mr. Luoma delivered address for W. F. Rockwell Jr., GAMA president Robert A.



Gas vs separates" was panel topic for (l. to r.) W. Hendrix, Cribben & Leon Oursoff, Washington Gas Light; Miss Mary E. Huck, Ohio Gas; and Herbert H. McMurray, Washington Gas Light director of sales



T. L. Robey, A. G. A. research coordinator (l.) and W. B. Kirk, A. G. A. Laboratories chief research engineer, discuss conference with Wednesday's luncheon speaker, G. H. McIntyre, vice-president and technical director, Ferro Corp.



Members of panel on incineration, cooking, and general heating depicted are (l. to r.): Otto B. Vogel, Boston Gas; Charles L. Ruff, Michigan Consolidated Gas; Robert A. Sloan, Philadelphia Gas Works; J. B. Bennett, Caloric



Reviewing major events of the conference are (l. to r.): H. P. Morehouse, Public Service Electric & Gas Co., Newark, N. J.; Joseph Grummer, U. S. Bureau of Mines, Pittsburgh, Pa.; and Charles C. Lamar, Harper-Wyman Co., Chicago

"Air Conditioning Research," Ira J. Rapson, district sales manager, Michigan Consolidated Gas Co., Detroit, who spoke on "Gas Versus Electric Surface Cooking," and Dr. F. E. Vandaveer, director of laboratories, The East Ohio Gas Co., Cleveland, who spoke on "Domestic Gas-Fired Incinerators, Present and Future."

Mr. Gamble's talk outlined the status of air conditioning research which was begun in late 1954. He described the projects now being carried out and the technical aspects of two gas air conditioning systems being tested in Holland and Switzerland. Mr. Gamble urged gas companies in all parts of the country to participate in the field testing programs of the several manufacturers who have produced units for that purpose.

Dr. Vandaveer, in reviewing the progress of A. G. A. research on the incinerator, pointed out that two prototype models already have been developed and constructed and still are under test. Dr. Vandaveer said that two manufacturers will have new incinerators designed to meet the latest A. G. A. requirements on the market within a few weeks for field trial purposes and that several other manufacturers have new models in various stages of development.

Mr. Rapson, chairman of the Committee of Comparison of Competitive Services, reported on how his company has been able to counter-act claims of competitors that electric cooking is better than gas cooking. He said that electric advertising infers that the entire range is 20 per cent faster than

gas but A. G. A. tests indicate that only under certain very limited conditions may one element be actually faster. One condition is that full line voltage must be supplied.

"It is doubtful," he said, "that full line voltage would be available under conditions found in the typical home installation. In any case, we know that as successive elements are turned on, the voltage drops."

At the noon luncheon meeting, C. S. Stackpole, A. G. A. managing director, was called on to greet the conference delegates in behalf of the Association. Mr. Stackpole enthusiastically urged the research and utilization men to drive for greater development and acceptance of gas service and appliances. In a more solemn vein, he commented on the death of Edwin L. Hall, director



Fred Kraemer (l.), manager of utilization, Minneapolis Gas, and K. H. Flint, chief engineer, heating and air conditioning, A. O. Smith, spoke on Wednesday



Water heating and general utilization panelists were (l. to r.): J. R. Thomson Sr., Rheem; F. P. Ryan, Hedges Mfg. Co.; Dr. R. C. Weast, Case Institute



Four panel speakers gathered are (l. to r.): A. B. Newton, Coleman Co.; C. George Segeler, A. G. A.; F. A. Ryder, Stewart-Warner; I. E. Rowe, United Gas

of the A. G. A. Laboratories on the eve of the conference. [Mr. Stackpole's tribute to Mr. Hall appears in the obituary article on page 3.—Ed.]

Herbert Luoma, director of technical services, Gas Appliance Manufacturers Association, spoke in the absence of W. F. Rockwell, Jr., president of GAMA, who was ill. Mr. Rockwell's paper was titled: "Sales Must Be Engineered."

He said: "We're all in business, or have invested in business, for one purpose and that purpose is profit. We technologically advance our products to improve our sales. We advertise and promote our products and services to improve our sales. Every man and woman in every business enterprise relies on company sales for his pay."

"Likewise, every technical project which we undertake must get its financing through the same medium—sales. Gentlemen, I realize that this conference is basically concerned with the technical aspects of our industry. May I assure you that my remarks will remain within this scope for, in my opinion, sales are a technical aspect of the gas industry! Sales, like our products, our maintenance and distribution systems, and like our technical and utilization achievements, must be engineered."

The afternoon session of the first day was divided into three panels: "Air Conditioning and Heating," "Water Heating and General Utilization," and "Incineration, Cooking and General Utilization."

In the panel on air conditioning and heating, presided over by F. A. Ryder, manager, home heating products, South Wind Div., Stewart-Warner Corp., Indianapolis, technical aspects of this field were discussed in an off-the-record session. Alwin B. Newton, vice-president, design and research, The Coleman Co., Inc., Wichita, spoke on "Effects of Adding Cooling Coils to Forced Warm-Air Heating Systems;" the topic of I. E. Rowe, director of utilization, United Gas Corp., Shreveport, La., was "Gas Engine Summer Air Conditioning Developments." Kenneth Wood, assistant superintendent, Cleveland operating, The East Ohio Gas Co., reported on the progress of producing service manuals, and C. George Segeler, A. G. A. engineer of utilization, chose the subject of

(Continued on page 51)

*FPC officials confer with gas industry
representatives at third Natural Gas Legal Symposium*

Explore legal aspects of regulation

A member of the Federal Power Commission, speaking before the Natural Gas Legal Symposium sponsored by the Practising Law Institute and the American Gas Association, said he had never heard a case presented so specifically and argued so brilliantly—before a hearing had even been set.

That humorous statement could well be applied to almost every presentation and panel discussion at the three day meeting held at the Waldorf Astoria Hotel in New York, April 9, 10, and 11. More than 300 legal and executive representatives of producer, pipeline and distributor companies, federal and state commissions, banks, investment houses, institutional investors, and industrial corporations attended the symposium. The majority remained through to the final session.

Greetings were extended by Harold P. Seligson, director of the Practising Law Institute and C. S. Stackpole, managing director of A. G. A. Mr. Seligson pointed out that twice as many were attending as had attended the initial symposium two years ago. The gas industry is faced with many problems today, especially since the Harris Bill veto. He said the meeting would be devoted to the discussion of as many of the resulting problems as time would permit.

William A. Dougherty, general counsel, Consolidated Natural Gas Co., New York, presided at the opening session. A major problem facing the industry, he declared, is the fact that no pricing method has been developed that will serve as a pattern for well-head pricing. The question of pricing independently produced gas is back on the industry's

doorstep, he said.

Mr. Dougherty introduced Willard W. Gatchell, FPC general counsel, who reminded delegates that the regulatory problems of the industry have been increasing in direct proportion to the economic growth of the industry over the past few years as the use of natural gas expanded.

The primary purpose of the Natural Gas Act was to protect consumers, he said. The commission must keep a balance between those who might want one-cent gas at the burner tip and those who might want one-dollar gas at the wells. Rates must be high enough to keep natural gas companies in healthy financial condition and encourage exploration and development. But if rates are too high, competitive fuels will displace gas in many areas.

FPC asks cooperation

The Supreme Court decision in the Phillips Petroleum case on June 7, 1954 placed a tremendous burden on the FPC. To perform its task, the commission must have the cooperation of the industry, companion regulatory agencies and consumer groups, Mr. Gatchell said. Further burdens have been added by court decisions since that time. There are now 72 petitions before courts for review of FPC orders now pending. While the commission is concerned over the lag in hearings resulting from interventions of interested groups, it is aware that many of the intervenors have reasonable and economic interests.

Escalation clauses in producer contracts have caused wide discussion. The

commission has expressed disapproval of two types of these clauses in prescribing rules for filings by independent producers. A new proposal would preclude after a certain date the filing of contracts which contain provision for adjustment of price by reason of escalator clauses based on price indices or changes in prices received by a producer on resale, or the payment or offer of payment of higher prices by a purchaser or other purchasers in the same producing areas to the same or other sellers.

This proposal, if adopted should remove some of the difficulties facing the industry. At present the FPC will not propound any rate formula but will take each case as it is presented to adopt principles that will give just and reasonable rates and will protect consumers.

John E. Jones, counsel, Stanolind Oil & Gas Co., Tulsa, outlined some of the regulatory problems facing the producer today. Commenting on recent reserves reports indicating increases of 22 trillion cubic feet through expansions of previous estimates and new discoveries, he said only 5.2 trillion cubic feet of new gas were discovered in 1955. This is indicative of lack of incentive on the part of producers to risk capital in exploration, he said.

Mr. Jones declared producers object to orders requiring them to apply for certificates, and to continue sales against their will and to continue deliveries after contracts have expired. Producers cannot guess the value of money five or ten years from now and shape contracts that would be equitable.

Producers deny that they are public
(Continued on page 54)

Management topics cover wide range



Opening session speakers included (l. to r.): G. W. Mitchell, Federal Reserve Bank; J. H. Carson, East Ohio Gas; E. L. Bjork, Peoples Gas Light & Coke



At Purchasing & Stores meeting are (l. to r.): F. W. Kroemer, Orleans; B. H. Firestone, NIPSCO; W. L. Brown, Peoples Gas

A wide range of subjects, extending from economics to Canadian gas reserves, was covered at the second annual conference of the General Management Section of the American Gas Association. The three day meeting was held at the Conrad Hilton Hotel, Chicago, April 4, 5 and 6, with more than 250 representatives of nearly every branch of the gas industry in attendance.

The General Management Section is comprised of eight Association committees: Accident Prevention, Comparison of Competitive Services, Corporate Secretaries, Economics, Insurance, Personnel, Purchasing and Stores, and Rate. Each of the committees participated in general sessions and in meetings adapted to the special interests of each group.

J. H. Carson, vice-president, The

East Ohio Gas Co., Cleveland, and chairman of the A. G. A. General Management Section, presided at the first general session. Delegates were welcomed to Chicago by Eskil I. Bjork, president, The Peoples Gas Light & Coke Company. Mr. Bjork served as the first chairman of the Section and commented on its growth in membership and activities. He pointed out the need of management for knowledge of the various parts of industry. Such need was satisfied by meetings such as the present conference, he stated.

John H. Wimberly, president, Houston Natural Gas Corp., introduced the next speaker, George W. Mitchell, vice-president, Federal Reserve Bank of Chicago. Mr. Mitchell said two minor recessions in the past decade, in 1948-1949 and in 1952-1953, had lowered gross national production

about 5 per cent, but present recovery had lifted production 11 per cent. Over-all post war growth of national production was about 4.1 per cent.

Stocks of durable goods at present are fairly high and some intensive selling will be needed to persuade consumer purchasing. He predicted that favorable conditions are ahead for the gas industry though retail sales in general have fallen slightly in the past two months.

Mr. Mitchell said new building starts in 1956 should be around 1,200,000. Despite challenge in 1956 on the price problem on consumer goods due to wage increases and other rising costs, he doubted that any economic drop would take place in the near future because of controls and knowledge gained from previous depressions.

How people feel about things was



A. G. A. President Dean H. Mitchell (l.) congratulates Section Chairman Carson on conference's effectiveness



Washington Gas Light's O. H. Ritenour (l.) and Leon Ourusoff discuss air conditioning



L. A. Brandt (l.), Peoples Gas Light, presided at general session. Dr. G. W. Govier was guest speaker



W. C. Norby (l.) poses with Corporate Secretaries Committee chairman, R. M. Drevs



Insurance Chairman R. T. Sprague (l.) and Personnel Chairman E. L. Ramsey are with E. S. Willis (r.) of GE

the subject of A. C. VanDusen vice-president and director of public relations, Northwestern University. He was introduced by Roy E. Jones, president, North Shore Gas Co., Waukegan. He discussed different areas of human behavior and pointed out to management that most employees, in all types of positions, feel the need for attention. Employees want to feel important and that they belong to the team. Praise is as important as criticism in securing best results from employees.

The funeral services in Cleveland of A. G. A.'s assistant managing director, Edwin L. Hall, prevented Dean H. Mitchell, president, Northern Indiana Public Service Co., and A. G. A. president, from appearing as luncheon speaker on Wednesday. With only a few hours notice, Martin Elliott, director of the Institute of Gas Technology,

most ably substituted for Mr. Mitchell.

Mr. Elliott spoke of the difficulty in getting and training gas engineers. More than 40 gas engineers are needed in the industry each year, but only 23, of all types, were graduated last year. He praised the PAR educational program for high school science students. He advocated that gas companies, through scholarships and other means, aid in recruiting students at the undergraduate level for advanced work in gas engineering.

At an afternoon session conducted by the Insurance and Personnel Committees, E. S. Willis, consultant for General Electric Co., discussed the dynamics in health insurance, stressing the value in morale of such coverage for employees.

Business meetings were conducted by the Accident Prevention, Economics

and Rate Committees, with the respective chairmen, R. E. McEldowney, United Fuel Gas Co.; Walter J. Herrman, Southern California Gas Co.; and Paul F. Hoots, New Orleans Public Service Inc., presiding. F. W. Kraemer, New Orleans Public Service, Inc., presided at a meeting of the Purchasing and Stores Committee, that included a report on activities of Gas Appliance Manufacturers Association, on appliance developments and merchandising. Inventories, costs and material handling also were discussion topics.

Leslie A. Brandt, vice-president, The Peoples Gas Light & Coke Co., and Section vice-chairman, was presiding officer at the general session on Thursday. Dr. George W. Govier, head of the department of chemical and petroleum engineering, University of Alberta, described Alberta's natural gas



Seated at head of table following Accident Prevention Committee meeting are (l. to r.): W. Vance Smith, Oklahoma Natural Gas Co.; Raul N. Papich, A. G. A.; R. E. McEldowney, United Fuel Gas Co., committee chairman; Leo Nuhfer, Peoples Natural Gas



W. J. Herrman, vice-president, Southern California Gas, presides at meeting of Economics Committee



Paul F. Hoots (head of table), New Orleans Public Service, conducts meeting of the Rate Committee. Committee heard papers "Growth of Gas Industry" and "History of Gas Industry," and discussed forthcoming joint meeting with INGAA Rate Committee in June

reserves and prospects. He said that in each of the past two or three years, 800 to 1200 development wells and 350-400 wildcat wells had been drilled.

The great bulk of these were oil wells due to the relatively strong market for Alberta oil and the lack of pipelines to carry gas to large markets. However, he said, out of every 100 wildcat wells, about 13 or 14 have been oil strikes and 19 or 20 have been gas strikes. This record is considerably better than the United States average.

Existing established reserves in Alberta in 1954, as stated by the Petroleum and Natural Gas Conservation Board of Alberta, were 13.4 trillion cubic feet. Present reserves approximate 16 trillion cubic feet. He believes that the ultimate gas reserves in Alberta will exceed 100 trillion cubic feet. Present consumption of natural gas is about 100 billion cubic feet per year for the entire province. It is conservatively estimated that Alberta will actually use nearly five trillion cubic feet of gas in the next 30 years. Dr. Govier forecasted 400 billion cubic feet per year could be exported by 1960 and by 1980 over 1,100 billion cubic feet per year can be exported.

Stuart M. Campbell, of the firm of Chicago business consultants, Booz, Allen & Hamilton, cautioned delegates that business expansion over the next few years might bring many management problems. Increased volume did not necessarily mean increased profits unless means for maintaining cost control kept pace with modern trends.

During the luncheon meeting, Dean H. Mitchell, president of A. G. A., lauded the individual and collective efforts of the eight constituent member committees of the General Management Section. Professor James J. Healy, associate professor of industrial relations, Harvard Graduate School of Business Administration, commented on possible implications of the recent AFL-CIO merger. He declared that from his experience in mediation and other labor relations activities, management had been lax in presenting its demands. Unions customarily presented demands and management presented answers. The recent Ford negotiations, he said, proved that if management took the initiative for the first part of the negotiations, bargaining was then guided by management demands.

(Continued on page 56)

Jacobs to open research meeting

The program for the coming West Coast Research and Utilization Conference, sponsored jointly by the American Gas Association and the Pacific Coast Gas Association, has been substantially completed. The meetings will be held at the Ambassador Hotel in Los Angeles on Tuesday and Wednesday, June 5 and 6, 1956.

W. M. Jacobs, vice-president and general manager, Southern California Gas Co., will deliver the keynote address on the morning of June 5. This will be followed by a report on the status of the gas industry's air-conditioning program, scheduled for delivery by Guy Corfield, utilization engineer, Southern California Gas Company.

A progress report on the latest A. G. A. research developments designed to speed up the domestic gas water heater will be given by C. H. Pountney, A. G. A. Laboratories, Cleveland.

The first day's luncheon meeting will be presided over by H. W. Geyer, director, West Coast research laboratory, Robertshaw-Fulton Controls Co., and general chairman of the Conference. C. S. Stackpole, A. G. A. managing director, will bring greetings of the Association to the conference. Introduction of the luncheon speaker will be made by Guy W. Wadsworth, Jr., president, Southern Counties Gas Co., and president, Pacific Coast Gas Association. The luncheon address will be given by a prominent representative of gas appliance manufacturing.

The Tuesday afternoon session, with Mr. Corfield presiding, will hear of the current status of gas incinerators. Dr. F. E. Vandaveer, director of laboratories, The East Ohio Gas Co., will present a paper entitled "Domestic Gas-Fired Incinerators—Present and Future."

G. J. Sandusky, manager, customers' service, Southern California Gas Co.,



H. W. Geyer is general chairman of West Coast research and utilization conference

will present a progress report on the new A. G. A. Heating Service Manual. This will be followed by an explanation of the new top burner heat control by Harry L. Warren, assistant utilization engineer, Southern California Gas Company.

Two interesting reports on how appliance field observations point to needed research, offered by A. D. Petersen, Southern Counties Gas Co. and Paul Speers, Southern California Gas Company, will conclude the day's program.

On Wednesday, June 6, the presiding officer will be J. F. Ray, vice-president, General Controls Co., Glendale, California. Earl J. Weber, A. G. A. Laboratories, Cleveland, will present a paper analyzing Research Bulletin No. 69, titled "Pilot Burner Design, Construction and Performance."

This will be followed by a clinic on "Built-In Vs. Free-Standing Appliances." Tentatively, the moderator will be Frank Foster, vice-president, Southern California Gas Company. Representatives are being contacted to speak on behalf of the utilities, builder, home economist, and manufacturer.



Guy Corfield will speak on air conditioning research, preside at Tuesday afternoon session

At the Wednesday luncheon an address will be delivered by Dr. Glenn H. McIntyre, vice-president and technical director, Ferro Corp., Cleveland, on how to manage a research and development department.

The Wednesday afternoon meeting will start with a panel session on "What's New in Requirements?" This session will be presided over by J. H. Hollingsworth, Holly Manufacturing Corp., division of Siegler Corporation. On the panel will be John C. Muller, manager, appliance development, Day & Night division, Carrier Corp., who will speak on house heating and water heating requirements. W. M. Couzens is scheduled to speak on "What Is New in Gas Range Requirements."

This panel session will be followed by a report on current general utilization research to be presented by W. B. Kirk, A. G. A. Laboratories, Cleveland. The program is designed to permit adequate time for questions and discussion.

The customary social hour, sponsored by the manufacturers' group, is scheduled at the end of the first day's sessions.

*1956 New Freedom Gas Laundry promotion
reaches national audience as gas companies swing behind
huge A.G.A.-Colgate \$100,000 giveaway*

Hail contest as 'biggest, best' laundry promotion

a PAR activity

The most successful laundry promotion ever launched! It will make merchandising history! An outstanding example of what the gas industry can do."

This is what they're saying about the recent A. G. A.-Colgate national laundry promotion, based on some of the results to date:

1. 150 gas companies, representing over 21,000,000 meters in 46 states, set up major promotions in their communities.
2. Sales of Bendix Gas Duomatic washer-dryers tripled over the same period last year.
3. Sales of Colgate's laundry detergent AD surpassed the company's fondest hopes.
4. Other large soap companies, seeing AD's skyrocketing sales, are contacting A. G. A. asking to be included in similar promotions.
5. Participating companies are asking for a repeat in 1957.

Timed to coincide with A. G. A.'s New Freedom Gas Laundry promotion (1956 Plan Book), A. G. A. and Colgate joined forces to promote modern gas laundry appliances and Colgate's

new advanced laundry detergent, AD, during the months of February and March. Working with them at the local level were gas utility companies, gas appliance dealers and supermarkets in every major city in the country.

Gas companies, big and small, really went to town! They set up attractive laundry displays on their sales room floors and in their auditoriums. Home service girls demonstrated modern home laundry techniques before capacity audiences of interested women. They sponsored local contests with New Freedom Gas Laundries and vacation trips to Mexico as prizes. They used local home shows, radio, television and newspaper facilities to advantage. Some even had laundry displays set up in local theaters, and one Southern gas company used a Goodyear blimp to advertise its local contest. And why not? Blimps use gas, too.

Colgate spent over a quarter of a million dollars promoting the contest nationally over major radio and television networks and for full-page ads in newspapers and trade publications. They also made available whole series of free newspaper mats to gas companies, dealers and supermarkets.

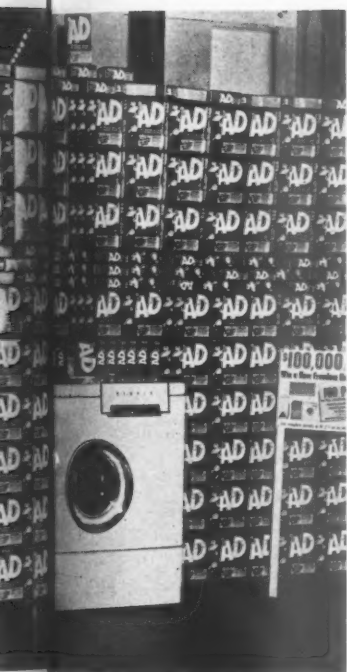
When the national contest was orig-



Huge display of Colgate's "AD" and display of dramatic backdrop for Milwaukee Gas Unit triplets



Gas companies used displays like the one above to arouse interest in contest and to show and sell the components of modern gas home laundry



AD" and display of gas washer-dryer. Sales of this
kees Gas tripled over last year during contest



RUUD "ALCOA ALLOY
the upgraded, laundry-rated
DUO-TEMP
Automatic Gas Water Heater

Featured on NBC-TV's
"FEATHER YOUR NEST"
by Emcee Bud Collyer
and
Hostess-Decorator Janis Carter

EVERY MONDAY DURING
JANUARY, FEBRUARY, MARCH
95 Stations, Coast-to-Coast

Aluminum Company of America

Attractive photo of TV star Janis Carter in gas home laundry setting was used as promotion piece by participating water heater manufacturer



National laundry contest was added attraction at Portland (Maine) Gas Light's "Parade of Gas Appliances" staged at state's annual home show

inally planned, the A. G. A. Promotion Bureau anticipated that about 60 gas companies would take part. This was based on past campaigns. As the contest got underway, this figure grew to 150 companies, over two and a half times as many as were expected. As a result, Colgate was swamped and some companies didn't receive as much AD and promotional aids as Colgate would have liked to make available.

"We did the best we could under the circumstances," explains A. G. A.'s promotion manager, Charles Bowen. "But we were unprepared for such an overwhelming response. Next year we'll know what to expect and will be prepared to take care of this magnificent gas company support."

"We've never seen anything like the

across-the-board support from a company not directly allied with the gas industry.

Supermarkets in 46 states, reckoned in the thousands, ran almost a million lines of newspaper advertising on the contest, with pictures of the New Freedom Gas Laundries to be awarded. They set up displays of modern gas dryers and water heaters in their stores and distributed millions of boxes of AD.

The tie-in was greatly facilitated by the fact that A. G. A.'s new advertising agency, Lennen & Newell, also has Colgate as an account. About to launch a new laundry detergent Colgate wanted to reach as many homemakers as possible. They also wanted to tie-in with a well-known manufacturer of laundry equipment to demonstrate the merits of

water heater and Youngstown Kitchens' color-coordinated sink and cabinets, contributed by the manufacturers.

A. G. A.'s Promotion Bureau arranged for the New Freedom Gas Laundries for prizes and display purposes, mailed out how-to-do-it brochures and sales promotion materials, and coordinated the activities of the 150 participating gas companies.

Colgate's 35 district managers contacted gas companies, appliance dealers and supermarkets in all 48 states, adapting the national contest to local needs. Elaborate four-color brochures, shelf-talkers, and similar promotion tools were made available to utilities and supermarkets, who in turn distributed 10,000,000 contest entry blanks and 2,800,000 boxes of AD imprinted with pictures and details of the New Freedom Gas Laundry prizes.

Colgate will award plaques to gas companies in five size categories putting on the best campaign. Each company will make a full report of what it did locally and the awards will be made the end of this month.

Here, picked at random, are a few examples of what gas companies did in their areas:

The Ohio Fuel Gas Company set up New Freedom Gas Laundry displays in its 62 offices, advertised the contest over radio and TV and ran attractive ads in 75 leading newspapers, throughout February and March.

The Portland (Maine) Gas Light Company (19,000 meters) set up a giant 72-foot display at the Annual Better Homes Show of Portland, in which it featured the contest. Visitors to the exhibit were given free boxes of AD. The company also set up individual New Freedom Gas Laundry displays in each of its three offices.

The Minneapolis Gas Co., suburban division (50,000 meters), used its home service demonstration periods to advantage in promoting the contest. It distributed boxes of AD through its salesmen and home service departments, advertised widely in local newspapers and acquainted customers paying their bills with details of the contest.

The Frederick (Md.) Gas Company was one of the smallest companies in size (2200 meters) but one of the biggest in effort. It enlisted the aid of all 21 employees, gave them full instructions on the details and merits of the

(Continued on page 34)



Theater lobbies were pressed into service to spread news about national A. G. A.-AD contest. Attention-getting display above was one of many appearing in Texas area

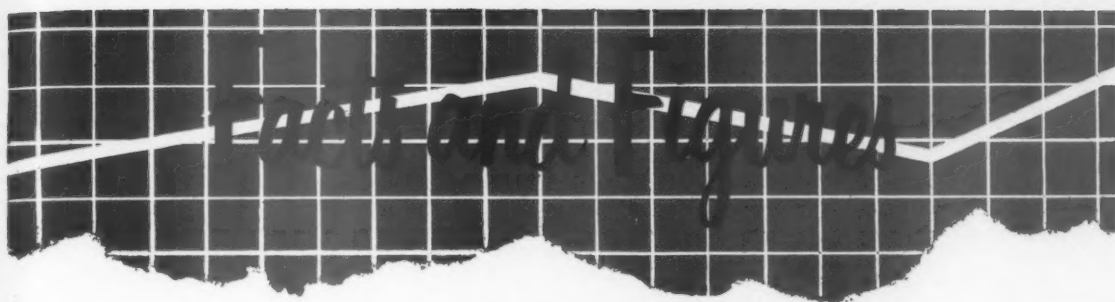
enthusiasm and support demonstrated by gas companies participating in the laundry promotion. It certainly shows what our industry can do when united in a common goal," Mr. Bowen said. "The Colgate people tell me that they have never worked with a nicer group. They benefited so much, they're after us to do it again next year."

The campaign is unique in that it is the first time one of the nation's giant soap companies (Colgate, the second largest advertiser in the U.S.A. with an advertising budget over 60 million dollars), has ever worked with the gas industry. It is also the first time that the gas industry has ever received such

their product.

Why not tie-in with A. G. A. and gas companies in every section of the country? Let the experienced home service girls demonstrate the product with the finest laundry equipment on the market—gas dryers and water heaters. A meeting was arranged between A. G. A. and Colgate, resulting in one of the most successful laundry promotions ever conceived.

The theme was built around a national contest which would award 100 complete New Freedom Gas Laundries, valued at \$100,000 as national prizes. These included a Bendix Gas Duomatic washer-dryer, Ruud Alcoa Duo-temp gas



Prepared by A. G. A. Bureau of Statistics

Gas utility and pipeline construction expenditures during the fourth quarter of 1955 totaled \$463 million, up 77.4 per cent from the \$261 million spent in the fourth quarter of 1954. Total estimated gas industry expenditures for the year were \$1,350 million. Preliminary estimates of gas industry construction expenditures for 1956 indicate that over \$1.2 billion will be spent in providing facilities to enable the industry to meet the demands of its present and anticipated additional customers to be added during the year.

A summary of industry construction expenditures, by quarters, for the past four years is presented in the accompanying table. (See page 52)

Total operating revenues of the gas utility and pipeline industry (including both pipeline sales for resale and distribution company sales to ultimate consumers) during 1955 reached a new peak of \$5,310 million, an increase of \$697 million, or 15.1 per cent above 1954. Operating expenses increased \$437 million to \$3,557 million, up 14.0 per cent on the year. Depreciation, retirements, depletion and amortization registered a 10.3 per cent gain during the same period. Tax accruals, however, increased at a faster rate than revenues. Federal income taxes jumped 27.1 per cent and all other taxes were up 14.9 per cent for a combined over-all increase of 22.2 per cent. After providing for interest payments and other deductions, net income of \$533 million represented a gain of 18.4 per cent over the \$450 million for 1954. (Table on page 52)

Shipments of automatic gas water heaters in March totaled 263,200 units, virtually the same as the number shipped during the same month a year ago. Shipments for the first two months of 1956 were 9.5 per cent greater than the comparable cumulative period of last year. Gas range shipments of 183,500 units

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES DURING MARCH, 1956

(WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	March, 1956		February, 1956		Two Months Ending February 29, 1956	
	Units	Per Cent Change	Units	Per Cent Change	Units	Per Cent Change
RANGES						
Gas	183,500	-15.9	186,100	- 0.2	338,000	- 0.6
Electric	n.a.	n.a.	140,000	- 3.7	265,900	-11.8
WATER HEATERS						
Gas	263,200	0.0	251,900	+10.3	481,100	+ 9.5
Electric	n.a.	n.a.	75,900	+ 0.7	145,100	+ 5.3
GAS HEATING						
Furnaces	60,400	+12.5	51,700	+ 8.4	108,500	+10.3
Boilers	6,800	+36.0	5,400	+45.9	10,300	+39.2
Conversion Burners	8,400	+13.5	7,300	+14.1	14,700	+26.7
DRYERS						
Gas	n.a.	n.a.	42,500	+49.3	85,000	+65.4
Electric	n.a.	n.a.	106,000	+31.3	229,800	+32.7

n.a. Not Available.

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES DURING FEBRUARY

(MILLIONS OF THERMS)

	1956	1955	Per Cent Change
Month of February			
All types of Gas	8,112.8	7,591.0	+6.0
Natural Gas	7,675.9	7,174.2	+7.0
Other Gases	436.9	416.8	+4.8
Twelve Months Ending February 29, 1956			
All types of Gas	68,451.0	62,971.2	+8.7
Natural Gas	64,913.6	59,599.4	+8.9
Other Gases	3,537.4	3,371.8	+4.9
Index of Monthly Utility Gas Sales (1947-49 = 100)	231.8	216.9	+6.9

PERTINENT BUSINESS INDICATORS, FEBRUARY

(WITH PER CENT CHANGES FROM CORRESPONDING PERIOD OF THE PRIOR YEAR)

	February		Per Cent Change	January		Per Cent Change
	1956	1955		1956	1955	
Industrial activity (1947-49 = 100)	143	133	+ 7.5	143	132	+ 8.3
Consumer prices (1947-49 = 100)	114.6	114.3	+ 0.3	114.6	114.3	+ 0.3
Housing starts, Non-farm (thousands)	78.0	89.9	-13.2	74.0	87.6	-15.5
New private construction expenditures (\$ million)	2,019	2,002	+ 0.8	2,124	2,073	+ 2.5
Construction costs (1947-49 = 100)	150.2	142.5	+ 5.4	150.2	142.4	+ 5.5

were down 15.9 per cent from the 217,300 units shipped during March of 1955.

Gas-fired central heating units shipped

during March aggregated 75,600 units up 14.4 per cent over the 66,100 units

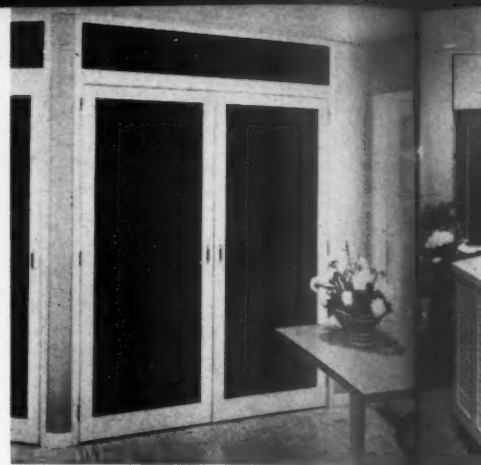
(Continued on page 52)



Brightest spot on Louisiana State fairgrounds is building above, erected by United Gas Corp., whose headquarters are in Shreveport

*United Gas turns fairground building
into permanent showcase to exhibit beautiful and
modern all-gas kitchens and laundries*

Fair's display draws teen-age students



Black cane-mesh doors disguise opening of built-in laundry, an adjunct to sleek, modern all-gas kitchen



Combination gas washer-dryer graces breakfast nook, charcoal kitchen. Note nearby work area and built-in set of

The picturesque expressions of a group of teen-agers have a way all their own of showing enthusiastic approval of the kitchen and laundry displays in the Natural Gas Building erected by United Gas on the Louisiana State Fair Grounds in Shreveport, Louisiana.

Between January and mid-May of this year, some 4,000 teen-agers—home economics students of high schools and colleges near the Northwest Louisiana city—will have had an opportunity to indicate their delight over the sleek beauty of the kitchens and laundries installed in the gas air-conditioned comfort of the Natural Gas Building.

Traveling in chartered buses from cities and towns up to 100 miles away, the youngsters and their teachers are brought into the building on regular schedules for two hours of intensive lectures and demonstrations.

United Gas sales supervisors and home

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Another view of charcoal kitchen shows built-in cooking units and island-type work counter. During Fair, nearly 200,000 persons toured building and exhibits



French Provincial kitchen was style hit of kitchens, with a black-and-white tile set off by pale blue-and-white tiles, accented by solid copper kettles



Entry to Natural Gas Building is on sweeping circle that leads to four all-gas kitchens and laundries. Interiors are by John Hannon, well-known designer



Conventional range and gas refrigerator fit decor of this blueberry-and-green kitchen, which was photographed for editorial pages of "House and Garden"

service personnel—specially trained for the job—have developed a presentation that is both informative and entertaining, and are making a host of young friends for gas and gas appliances.

The Natural Gas Building, erected by United Gas in October, 1955, houses four beautifully appointed gas kitchens, and around these kitchens is built the lecture and group discussion program. The first 20 minutes of the class are devoted to the story of natural gas, its production, transmission and distribution. The remaining time is used to discuss the four kitchens and to answer questions by the students.

After the closing question and answer period the students are taken to lunch. Transportation is furnished the students without cost to and from their schools.

This program, to reach the youth of the area, is part of an over-all public relations job to bring people to the Natural

Gas Building and demonstrate to them the conveniences and advantages of gas appliances. The building is open to the public one day a week, and several women's organizations have evinced interest in using it for their meetings.

The Natural Gas Building, opened for the first time during the Louisiana State Fair last fall, was formerly the old Industrial Arts Building. It was completely remodeled and modernized, the old red-brick exterior giving away to modern, corrugated steel and colorful stucco, overhanging eaves and a graceful marquee shading an entirely new entrance.

Inside, the reformation is still more striking. A circular terrazzo concourse encloses a raised lounge in the center of the building, and in each corner is a smartly modern gas kitchen, complete to the last detail. The architect also provided flexibility for future floor plans. Four five-ton Servel gas air conditioners

and a seven and one-half ton Weather-buster provide year around comfort and also serve as displays.

The kitchens became a major attraction at the Fair when some 150,000 persons visited the exhibit and were described by many as "the smartest I have ever seen."

Laundry rooms, once the eyesore of a home, are shown as charming centers of interest, with matching washers and gas dryers, gas water heaters and utility cabinets. All of the gas appliances are connected and in operation, creating "live exhibits" so that they may be seen just as they would appear in a home.

One of the kitchens is sleekly modern. Cooking, living, dining and laundry areas are so arranged that the kitchen can be one complete room or divided into sections by a folding louvered door that swings out to conceal work areas.

The cooking area includes a completely automatic gas built-in oven, broiler and top burners set in charcoal cabinets. Nearby is a Servel gas icemaker refrigerator recessed into the cabinets.

The living and dining area is appointed with accessories from around the world, including an Italian marble table, black iron Louis XV folding chairs and a chaise lounge upholstered in an orange tulip fabric.

In the laundry and planning room, a white Formica surface counter separates the gas counter-top water heater and automatic combination washer-dryer. Il-

luminated by fluorescent light, the area includes a high-back black iron kitchen stool and a charcoal colored telephone. An island arrangement for food preparation incorporates a concealed automatic dishwasher, stainless steel sink and food disposal unit.

The kitchen that steals the heart of every visitor has a French Provincial motif. In it the designer has successfully combined functional gas appliances with charming antiques. The color scheme is startling black and white complemented by gleaming copper, bittergreen and Cerulean blue.

The cooking area begins with a black and chrome built-in gas oven and broiler set in a white brick wall. Completing the cooking area are top burners set in a gleaming black counter.

At the end of the counter stands a jet black Servel gas icemaker refrigerator. The dining area, backed by French doors which open out on a patio, is furnished with black iron, lyre-back dining chairs upholstered in antique linen, and a black lacquered dining table highlighted by gold-leaf dessert plates—circa 1830—and antique brass candlesticks.

(Continued on page 53)

South Jersey's Hospitality House proves worth



South Jersey Gas' Hospitality House with two-story Colonial facade is next door to company's main office in Atlantic City. Opened September, 1955, it has had 5,000 visitors



Dolls are subject at meeting of Arts & Crafts Division, Research Club, but of universal interest to women visitors is kitchen on stage with latest gas appliances in operation

More than 5,000 people have utilized the facilities of South Jersey Gas Company's Hospitality House since it was opened in September, 1955. The groups which have used the center run the gamut of social and civic organizations in Atlantic City, ranging from various church groups to the League of Women Voters.

The reception accorded Hospitality House has been very gratifying to South Jersey Gas, according to President T. H. Kendall. The showplace was conceived, built and dedicated to community service and was the company's way of saying "Thank you" to the 75,000 customers who made possible the company's growth since the introduction of natural gas in 1951.

Hospitality House adjoins the gas company's main offices in Atlantic City, which are situated in the city's main business and shopping district. The interior of the striking building offers comfortable accommodations for up to 100 persons, and is adaptable for either a formal meeting or informal gatherings for discussion groups, card parties, etc.

The color scheme of the large room is in dusty rose, turquoise and brown, all keyed to a lovely scenic Down East wallpaper. Furnishings are authentic reproductions of maple, pine and hickory period pieces, with a colonial fireplace serving as a focal point.

Chief attraction is an all-gas kitchen of efficiency and beauty. Placed on a raised platform, the kitchen is used by South Jersey Gas home economists for instruction and demonstration purposes. The opportunity to inspect and see in use the latest gas appliance equipment has proved to be the strongest drawing

(Continued on page 54)

Tell gas story in animated display

*Pushbutton exhibit
in Southern California
lobby brings alive
history of natural gas*



The graphic story of natural gas is being told to customers with a colorful, animated display unveiled in the lobby of Southern California Gas Company's general headquarters in Los Angeles.

The beautifully illustrated exhibit, stretching 20 feet long and standing seven feet high, dramatically depicts the flow of natural gas from wells buried deep under the earth through transmission and distribution pipelines and into active use in homes and factories.

Prepared by the public relations department, the viewer-activated display is composed of three units: a large, central exhibit flanked by two small models. The first of the small units consists of an operating, cut-away domestic gas meter showing the action of the diaphragms in measuring actual consumption of gas. Dials on the front surface of the meter record the measurement just as a meter operating in a home would record it.

The other flanking unit is devoted

to projection of 48 full-color slides in a continuous, breath-taking Parade of Kitchens. Latest designs in kitchen planning and modern, built-in gas appliances are featured in the slides.

A complete scale-model natural gas system comprises the center section of the display. Flow of gas from the well head through a network of pipelines is depicted with colored lights to show its movement into an underground storage reservoir and on to domestic, commercial and industrial consumers. This self-activated portion of the unit is accompanied by a two-minute sound recording which briefly explains the steps from production of gas at the well to its final consumption. Narration for the exhibit is provided by John E. Baird, prominent public speaker and consultant to the public relations department.

Viewers activate the display by pushing a button prominently located at waist level on the front of the exhibit. As the flow of gas leaves the well, an automatic timer releases the recording

with an accurate description of the process:

"Buried a million years . . . deep in the crust of the earth . . . is locked a vast resource of heat and energy: natural gas. The clear blue flame that warms your house and heats your water, cooks your food and dries the wash doesn't just happen. For natural gas is highly processed and travels a long way before it reaches your home to become your household servant. First, a deep well must be drilled several thousand feet down. From its cavity of porous rock the natural gas is produced generally in connection with flowing oil. This mixture of oil and gas is piped from the many wells to the refinery. . . ."

As the viewer watches, the flow of gas from the well to the refinery is demonstrated with a series of colored lights. Processing of the natural gas at the refinery is then described:

"In a separation tank the heavy



Section of the animated display is an operating, cut-away domestic gas meter showing action of diaphragms in measuring gas

Stored gas two-fifths of state gas reserves, reports PNGMA

NATURAL GAS stored underground in produced-out, but now reconditioned gas fields in western Pennsylvania represented nearly 40 per cent of the state's total known recoverable gas reserves of over 754 billion cubic feet at the beginning of 1956, the Pennsylvania Natural Gas Men's Association announced in its report on industry operations.

The 293 billion cubic feet of natural gas reported in underground storage pools in Pennsylvania on Dec. 31, 1955, was the largest volume of stored gas in any state. Net increase in stored gas reserves in Pennsylvania for the year 1955 was 35 billion cubic feet, PNGMA reported, and the total stored re-

serves represents an outlay of more than \$85 million by gas utilities in the state for imported Southwest gas. Another \$55 million has been invested in storage wells, compressor stations and pipelines.

Just three years ago, the proportion of stored gas in Pennsylvania to total known reserves was only 22 per cent. While total known reserves of natural gas in the State are up only six per cent since 1952, the volume of stored gas has increased 87 per cent.

New discoveries of native natural gas and re-estimates of reserves in active gas fields in the state totaled over 111 billion cubic feet in 1955. Production of natural gas, however,

crude oil falls to the bottom of the tank, while the lighter gas rises and is piped off. A second processing in the absorption plant removes gasoline and heavier gases, leaving a purified natural gas for domestic, commercial and industrial use. . . .

In rapid succession, the flow of natural gas through interstate pipelines, into underground storage, and to final use by customers is carefully explained in close coordination with the animated display.

Additional units of the display are being planned to carry the story of natural gas directly to customers. One unit will eventually be installed at the California State Museum of Industry and Science in Los Angeles, where nearly 52,000 persons—including 20,000 elementary and secondary school students—receive tours of inspection every month.

Other units will be used for display in company offices throughout Southern California and shown prominently at shows, fairs and expositions.

slightly more than offset discoveries of new native reserves. Total net production in 1955 was 123.6 billion cubic feet, down 22 per cent from the all-time record in 1954. Royalties paid to the Commonwealth for gas production on state lands in 1955 totaled over \$4 million.

Natural gas consumption in the state past year continued the growth pattern of steadily increased usage that has occurred each year since the war, the PNGMA report noted. PNGMA member companies reported total sales of over 273 billion cubic feet, up 12 per cent over 1954. Nearly two-thirds of the increase of 30 billion cubic feet was accounted for in booming industrial sales.

PG&E plans to convert gas field to underground storage area

A YOLO COUNTY gas field is planned for conversion into the first natural underground storage area in the system of the Pacific Gas and Electric Co., San Francisco.

Estimated to have a usable capacity of 3.25 billion cubic feet, the Pleasant Creek field northwest of Winters is being planned as a storage area where natural gas obtained by PG&E, during periods of low demand, can be stored for use when needed.

The company has an average daily sendout of more than a billion cubic feet a day. It receives 760 million cubic feet a day through pipelines stretching to New Mexico and Texas fields and obtains the remainder from fields in California. Within the next three years,

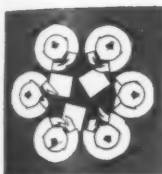
PG&E plans to increase its importation of out-of-state gas to over one billion cubic feet daily, because of anticipated increases in the number of customers and in their demands. The company now has more than 1.4 million gas customers.

The field was discovered in 1948 when gas was found in a porous sand formation at a depth of about 2800 feet. Altogether, 10 wells were "wildcatted" by various interests and three became productive.

The three wells will remain in operation and PG&E intends to drill six more. The company also plans to build a 2640-horsepower compressor station on the site and to lay pipe in a "gathering system" which will

connect each well to the compressor. The compressor plant will be capable of injecting gas obtained from its general system at a rate of about 36 million cubic feet a day. It is expected that the project will be capable of delivering gas from storage into the system at a maximum rate of 80 million cubic feet a day, enough to serve all the demands of a city the size of Sacramento.

A main of 16-inch diameter is planned to connect the field with the PG&E's main transmission system in the vicinity of Dixon. At present, the Pleasant Creek gas is delivered into the system through a four-inch line. The entire project, including rights on about 2200 acres, is estimated to cost about \$3.3 million.



Industrial relations round-table

Prepared by
A. G. A. Personnel Committee

Edited by W. T. Simmons

Assistant to the Personnel Manager
Philadelphia Electric Company

● **Newest fringe benefit**—Do you have trouble holding ambitious, competent engineers? Judging by the pace-setting efforts of United Aircraft Corp. (E. Hartford, Conn.), the problem will become even tougher. United's newest "fringe benefit": easy accessibility to a graduate school. The company (which employs 4500 engineers and skilled technicians) persuaded Rensselaer Polytechnic Institute to set up a graduate extension school near the plant, 115 miles from RPI.

Some 210 engineers from United attended this school free during off-hours. A man can get his master's degree in 2½ years. As benefit programs go, it's in the luxury class—\$600,000 for classrooms alone, \$50,000 per year for operating costs.

For companies near educational centers, such a program in advanced engineering has been available for some time. But plants in remote areas have a rougher time. You might try securing extension plans like those offered by many universities for undergraduates. Or, like United, try pooling requirements and facilities with other plants in your area. State universities, especially, are cooperative in solving such educational problems.

● **Speed reading for your supervisors?**—Why not? You don't have to call in the pros. A training director can plan and conduct a "home-made" course, says Ben B. Mason, assistant to manager of employee relations, Arma Division, American Bosch Arma Corp., Garden City, New York. At Arma, where they skipped the frills, they emphasized need to practice—and doubled reading skills.

Find the main idea. Once you've mastered the mechanics of faster reading, the trick is to look for the main idea. Here's where you're most likely to find it:

... In a business letter. Start with head, then body, then signature.

... In a newspaper article. Read headlines and subheads, then first paragraph. Read on only if you want details.

... In a technical journal or business magazine. Read title, blurb and first paragraph. Skim the text for major theme, check subheads. Read last paragraph.

... In a reference book or text. Start with table of contents, introduction, and any preliminary notes. Read first and last chapters—reading first and last paragraphs of each and skimming rest of text. Treat other chapters the same way.

● **Guard's memory jogger**—How are your

plant guards? Above reproach? Or are they sometimes surly? Hard for visitors and employees to get along with? In any case you may want to consider a handy training aid designed especially for your plant security staff. It's a monthly note-book-calendar-magazine called the Guard's Memory Jogger. Contains brief articles to help guards and watchmen develop their human relations skills. Costs about 25¢ in quantity and is published by National Foremen's Institute, New London, Connecticut.

● **Technical training made easier**—We suggest two new training aids.

1. American Society of Tool Engineers is developing a series of program kits to aid technical presentations made by your qualified instructors. First kit is called "Forces in Single Point Tool Metal Cutting." Discusses purpose of various tool angles, chip types, cutting variables, hardness as a measure of machinability. It's useful for teaching machine operators as well as tool designers. Each kit contains (1) a speaker's manuscript, (2) visual aids (slides), (3) up to 25 free copies of program for distribution. Takes about 45 minutes to present. To borrow, write National Program Committee, ASTE, 10700 Puritan Avenue, Detroit 38.

2. Miniaticnic, 15 Auf der Mauer, Zurich 1, Switzerland, makes kinematic models of mechanisms for use in training mechanics, apprentices, designers. A few of the 50 models now available: crank and rocker, four-bar linkage, Watt's planetary gear, curved cross-slider crank, Maltese cross mechanism, indexing angle 60 or 90 degrees. Models are machined to close tolerances out of metal, measure approximately 6 inches square. They are sold in four sets of 13 models each. Sets cost about \$100. Buy with UNESCO coupons.

● **Court decisions—Unfair practice strike v. no-strike clause**—An employer, though seemingly protected by a broad "no-strike" clause and the NLRA's requirement that a union observe a 60-day cooling off period before resorting to strike action, is still vulnerable to strikes resulting from his own unfair practices. The U. S. Supreme Court recently ruled that employees are free to strike against an employer's unfair practices, without giving notice and regardless of an agreement by the union not to engage in "any strike" during the term of its contract (*Mastro Plastic Corp. v. NLRB*).

Generally, employees who strike in violation of the terms of their union contract, such as no-strike clauses, lose the protection of the Act, and can be fired. Likewise, as a rule, if a union calls a strike without first following the 60-day cooling off provisions of the Act, the strikers are subject to dismissal.

In the *Mastro* case, the union contract provided that the union "agrees to refrain

from engaging in any strike or work stoppage during the term of the agreement." However, the employees did go on a strike, but solely in protest against the employer's unfair labor practices. The strike was called within 60 days after the union had given a notice of a desire to modify the existing contract.

The Supreme Court concluded that the no-strike clause, when considered in relation to the rest of the contract, applied to strikes and work stoppages involving the subject matter of the contract. The contract was a typical collective bargaining agreement which dealt solely with the economic relationship between the employer and the employees. Since the strike was not for economic reasons, but was prompted solely by the employer's unfair labor practices, the Court held that the no-strike clause was not violated.

● **NLRB rulings—Board reverts to 1946 rule on "confidential" employees**—In a unanimous decision, the NLRB decides that from now on in dealing with the question of exclusion of "confidential" employees from rank-and-file bargaining units, it will follow a rule established in a pre-Taft Act case.

The Board reverts to the old rule, established in the *Ford Motor Company* case of March 28, 1946, in ordering an election at The B. F. Goodrich Co., Oaks, Pa., petitioned for by Local 281 of the United Rubber, Cork, Linoleum and Plastic Workers of America. In the 1946 *Ford* case the Board decided to limit the term "confidential" to take in "only those employees who assist and act in a confidential capacity to persons who exercise 'managerial' functions in the field of labor relations."

Since the *Ford* case, the Board has expanded the rule in a number of decisions. It has excluded from bargaining units, for example, secretaries to persons handling grievances, and cashiers with access to labor relations policy data, as being "confidential" employees. The Board now overrules those expansions of the *Ford* rule. In deciding to revert to the more restrictive *Ford* rule, the Board says it is impelled to do so on the basis that expansion of the doctrine "needlessly" excludes employees from bargaining units. The Board expresses it in this way:

"Upon further examination of our holdings in the instant connection, we are still of the opinion expressed in the *Ford Motor Company* case that any broadening of the definition of the term 'confidential' as adopted in that decision needlessly precludes employees from bargaining collectively together with other employees sharing common interests. Consequently, it is our intention herein and in future cases to adhere strictly to that definition and thus to

(Continued on page 51)



Gathered are (l. to r.): Section Chairman E. R. Eberle; Dean H. Mitchell, president, A. G. A.; EEI Accounting Division Chairman J. C. Faris; H. C. Forbes, president, Con Ed



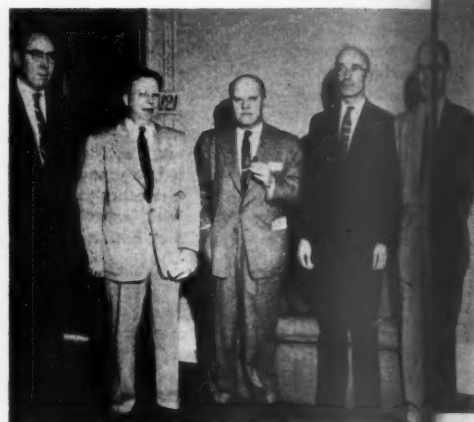
J. W. Balet (r.) of Con Ed speaks on "Electronic Sing of Payroll" at Tuesday's general activities



E. J. Leahy (l.), Leahy & Co., confers with A.G.A.'s managing director, C. S. Stackpole



Rev. Vincent Hart gave invocation; Judge H. Lester Hooker spoke on regulation



Tuesday speakers were (l. to r.): M. S. Lonon, H. E. H. W. Ziethen, G. J. Coval, J. M. Kearns, H. M. W.

Accountants seek cost reductions



Depreciation problems were discussed Wednesday at Hotel Biltmore by (l. to r.): L. W. Robinson, C. N. Rice Jr., P. K. Read, O. E. Smith



Internal auditing sessions hears report by Harris R. Symes. Seated are (l. to r.): R. B. Tritton, Charles Mullen, and Biron Ganser



Plant Accounting and Record Properties Committee chairmen seated beside speakers are M. B. Romeiser (l.) of EEI, G. F. Dixon of A. G. A.

Cost reduction through improved accounting measures was established as the theme of the National Conference of Electric and Gas Utility Accountants held in New York at the Commodore Hotel, April 16th to April 18th, 1956. More than 1,200 delegates, a record attendance for the conference, were present at the three-day meeting sponsored jointly by the Accounting Section of the American Gas Association and the Accounting Division of the Edison Electric Institute.

Edward R. Eberle, Public Service Electric and Gas Co., and John C. Faris,

Union Electric Co., chairmen of the respective association groups, presided at the opening meeting. Greetings and words of welcome were expressed by Harland C. Forbes, president, Consolidated Edison Company of New York, Inc.; Dean H. Mitchell, president, A. G. A.; and H. S. Bennion, managing director, EEI. C. S. Stackpole, managing director of A. G. A., extended an invitation to all delegates to make use of any and all facilities of A. G. A. while in New York.

Edwin Vennard, vice-president, EEI, commented on the cost reduction theme

of the meeting. He pointed out utilities were industries of heavy investment. To increase returns and attract added investment, utilities would have to increase sales or cut costs, or do both. With no reflection on the importance of increased sales, he pointed out that one dollar saved in expense was equal to about four dollars in increased business. Both were needed in the industry.

He cautioned that automation might create misunderstanding on the part of labor and should be preceded by educational efforts by utility companies.

Emmett J. Leahy, management con-

sultant, spoke on the great cost of preparing and filing correspondence and reports by American business. He said the nation's office workers turned out more than 175 billion pieces of paper annually. Pipeline companies can transport a gallon of oil more than a thousand miles for a penny, tankers can carry oil from Texas to Maine for a penny a gallon, but it costs a minimum of a penny to keep a single piece of paper in an office file for one year.

Regulation is a living thing, according to Judge H. Lester Hooker, Virginia State Corporation Commissioner. It is not static, and there is no rule of thumb method or formula in regulation that is not subject to change. If regulation did not change to meet the inflationary conditions that have been and are now existing, it would not be operating in the public interest. It would become static and disappear, Judge Hooker said.

It is the duty of all regulatory commissions to exert their best efforts to keep all utilities in a sound financial situation, he said. This is essential in order for them to expand their business so they can adequately meet the demands for service required by the public.

Arthur H. Motley, president, Parade Publications, told delegates they would encounter nothing in 1956 and 1957 that they had not met before, in one form or another. With regulated industries or otherwise, the economy is going to grow and today a most favorable climate for business exists. He said news was the most salable product any business has today, and he advised the executives present to get out and find out what was new in their services and product and to sell it vigorously.

Electronics occupied a prominent place in the conference. It was the opening subject at a meeting of the general activities group on Tuesday morning. R. H. Johnson, The Brooklyn Union Gas Co., and C. T. Dwight, The Hartford Electric Light Co., served as co-chairmen at the meeting. Electronic processing of a payroll was described by John W. Balet of Consolidated Edison. A. B. Toan, Jr., Price Waterhouse & Co. told how electronically produced records are audited. George T. Logan, Philadelphia Electric Co., was moderator of a panel which discussed liberalized depreciation.

At a meeting devoted to accounting employee relations, George A. Ford, The Connecticut Light & Power Co., and J. F. McCahon, Philadelphia Electric

Pictured speakers discussed developments in electronics accounting machines at luncheon on Wednesday at Commodore



Presiding over employee relations panel were J. F. McCahon, Philadelphia Electric and G. A. Ford, Connecticut Light & Power



Seated men presided over customer accounting session. Left to right: J. C. Luchsinger, R. B. Herrold, and A. B. Wilson



Standing are E. M. Alt (l.) and S. A. Cole (2nd from l.) who presided over Wednesday's customer activities session





Tuesday general accounting meeting heard talks on "Productivity Accounting" and "Operations Research—What Is It?"



At lectern at customer accounting luncheon is J. F. Comelford speaking on equalization plan for heating bills payment



Shown are speakers who delivered talks at the Tuesday morning session on customer collections, at the Biltmore



Customer Relations Committee chairmen seated by speakers are H. F. Martin (l.) of EEI, B. J. McMillen (r.), A. G. A.

Company, presided. Subjects included employee indoctrination, wage costs and employee security.

R. B. Herrold, Columbia Gas System Service Co., and J. C. Luchsinger, The Cincinnati Gas and Electric Co., presided at an all-day meeting on customer accounting methods and problems on Tuesday. Concurrently, a group discussing customer collections was headed by J. E. Malone, The East Ohio Gas Co., and R. B. Williams, The Toledo Edison Company. A meeting and luncheon sessions on customer relations were headed by B. J. McMillen, The Cincinnati Gas & Electric Co., and H. F. Martin, Long Island Lighting Company.

A get-together luncheon at noon Tuesday was sponsored by the Internal Auditing Committee. Also conducting a luncheon session was the Plant Accounting and Property Records group, with G. F. Dixon, Milwaukee Gas Light Co., and M. B. Romeiser, Niagara Mohawk Power Corp., as co-chairmen.

Other meetings held Tuesday afternoon included one on depreciation accounting, headed by S. W. Binkley, Southern California Gas Co., and P. K. Read, New York State Electric & Gas Co.; and a general accounting meeting with James A. Laing, Natural Gas Pipeline Company of America, and R. J. Plourde, The Detroit Edison Co., as chairmen. Charles Mullen, Niagara Mohawk Power Corp., and Biron Ganser, Philadelphia Electric Co., served as chairmen for an afternoon meeting on internal auditing on Tuesday.

Because of the record attendance it was necessary to hold some of the committee meetings at the Hotel Biltmore and the Hotel Roosevelt. The latter hotel was the site of the general accounting meeting, while meetings on customer collections, customer relations and taxation accounting were held at the Hotel Biltmore. The taxation accounting meeting was moderated by M. S. Lonon, Consolidated Natural Gas Co., and Henry M. Hobson, Public Service Electric & Gas Company.

On Wednesday the customer activities group met at the Hotel Commodore with E. M. Alt, Northern Indiana Public Service Co. and S. A. Cole, New York State Electric & Gas Corp., as coordinators. The depreciation accounting meeting was continued Wednesday at the Biltmore under Mr. Binkley and Mr. Read.

Other meetings that carried over to



Members of head table at formal luncheon included (l. to r.): C. D. Johnston, Chamber of Commerce, guest speaker; J. C. Parrott, Roanoke Gas president; M. A. Combs, A. G. A.; L. E. Biemiller, Section chairman



The afternoon speakers on the last day of the Sales Conference on Industrial and Commercial Gas were (l. to r.): William P. Swartz Jr., Roanoke; B. L. Landis, Ardmore, Pa.; and Hayes S. Walter, of A. G. A.



Morning speakers on Commercial Gas Day included (l. to r.): E. J. Mayland, Gas Magazines, Madison, Wisc.; M. A. McClurg, Laclede Gas Co., St. Louis, Mo.; and L. J. Fretwell, Oklahoma Gas Co., Tulsa, Oklahoma



Members of the panel on new applications for gas in industrial processing which opened the conference included (l. to r.): A. D. Wilcox; F. C. Schaefer; G. R. Van Kampen; A. H. Koch; and Lowell F. Croun

Commercial, industrial sales take spotlight

Industrial Gas Day led off the three-day 1956 A. G. A. Sales Conference on Industrial and Commercial Gas at the Hotel Roanoke (Va.), April 17, 18 and 19. For the first time, two other gas associations, the Southeastern Gas Association and the Southern Gas Association, cooperated in sponsoring this conference. This resulted in a larger attendance in this location than would have been the case without the southern associations' support.

Over 200 men were registered from 28 states, the District of Columbia and the Canadian Provinces of Ontario, Alberta and British Columbia. Included with the industrial gas engineers and commercial gas men were sales executives and some 40 manufacturers' repre-

sentatives together with about a dozen pipeline, advertising and editorial men. More delegates' wives than ever before attended—some 53 were registered.

Section Chairman Lawrence E. Bie-miller presided at morning sessions and Vice-Chairman J. Robert Delaney presided during the afternoons. On this first day, nine speakers discussed technical phases of industrial gas. New applications were discussed by F. C. Schaefer, American Gas Furnace Co.; G. R. Van Kampen, Red-Ray Manufacturing Co.; A. H. Koch, Surface Combustion Corp.; and Lowell F. Crouse, The Maxon Premix Burner Company. Many slides were shown to illustrate more clearly the new equipment and the particular application under discussion.

How gas gives an improved product in ceramic kilns was discussed in a paper by John Sellors, Bryant Industrial Products Corporation. He described the various gas applications to different types of kilns and showed the economy to be had through improved quality of brick, fewer rejects and, in most instances, a speed-up in production.

One of the most interesting presentations was that by Raymond R. West, Minneapolis-Honeywell Regulator Co. who had a demonstration panel to illustrate the operation of protective controls and devices. He showed how safety equipment is applied to boiler installations through pressure and temperature control systems, temperature and pressure cutouts, low water cutoffs, gas con-

trol valves, air flow switches, flame safeguards and combustion efficiency controls. Mr. West also showed the programming for relight service with both standard and automatic pilot ignition.

K. N. Hawk, The East Ohio Gas Co., presented a well-detailed paper appraising boiler conversions. He mentioned and discussed in particular the factors involved in converting a boiler for a 460-bed hospital and a forge shop with steam hammers ranging in size from 2,000 to 35,000 pounds.

Oliver Pritchard opened his discussion on non-ferrous melting by stating the magnitude of this section of the metal-working industry. According to the latest figures available, in 1953 foundries—both jobbing and captive—produced 1,012,787 tons of salable castings for which they spent \$3,595,000 for gas and nearly \$6 million for other fuels.

There is still a broad field for the gas industry in non-ferrous metal melting, said Mr. Pritchard, adding, "The acceptance of gas fuel is increasing yearly. This trend is given further impetus by the extension of natural gas to many new areas where there is much non-ferrous metal melting." There will be new furnace designs, he stated, and it is up to the gas industry and equipment manufacturers to see that more and more non-ferrous metal melting goes to gas.

Following custom, the general session was held on the second day of the conference. Official greetings were received from John C. Parrott, president, Roanoke

Gas Co., and from representatives of the two cooperating associations. Speaking for the Southeastern Gas Association were J. Earl Connolly, first vice-president; and from the Southern Gas Association, J. J. Sheehan, chairman of the Sales Section.

For the first time at a Section Conference, a pipeline executive was a speaker. R. S. Bruns, Jr., vice-president, Transcontinental Gas Pipe Line Corp. had as his subject, "A Supplier Looks at Industrial and Commercial Gas Sales." Mr. Bruns pointed out the importance of a good load factor to a pipeline and how the valuable industrial and commercial load of a distributing company contributed much to a pipeline's stability.

"I believe," he said, "that industrial sales today are a far more important element than merely a percentage of total sales. They are a means of load balancing which results in the ability to purchase pipeline gas at a uniform high load factor with the resultant minimum rate. Therefore, these sales are an important contributor to your company's prosperity."

Vice-Chairman Delaney's address asked for the gas industry to present a solid front. He implored the industry to tell the story of the growth of this sixth largest and fastest growing industry which is now supplying 25 per cent of the total energy requirements in our country. "Let's stop assuming that we are doing ourselves a favor in talking about competition," Mr. Delaney said.



Using a demonstration panel to illustrate his talk, Raymond R. West, Minneapolis-Honeywell Regulator Co., explains the operation of protective devices



Meeting before the conference are (l. to r.): J. Robert Delaney; L. E. Bie-miller; John C. Parrott; R. S. Bruns Jr.; J. Earl Connolly; and J. J. Sheehan

"Let's use what we have to the best of our abilities. We have what it takes. Let's tell our story."

At the end of the Wednesday morning session, awards were presented. The first was the GAMA PEP Contest Awards for the winning companies in the PEP Commercial Appliance Sales Campaign of 1955. In Class I, 100,000 meters and over, M. A. MacClurg, Laclede Gas Co., St. Louis, received the plaque and check for his company. In Class II, 25,000 to 100,000 meters, J. J. Sheehan accepted for Piedmont Natural Gas Co., Charlotte, N. C., and for Class III, less than 25,000 meters, Joseph Betz, The Keystone Gas Co., Inc., Olean, N. Y., received the award.

The following certificates for the Industrial and Commercial "Hall of Flame" were presented to the new mem-

idence Gas Co., Providence, R. I.; Arthur Q. Smith, A. G. A.; Edmund A. Spanagel, Rochester (N. Y.) Gas and Electric Corp.; G. R. Van Kampen, Red-Ray Manufacturing Co., Cliffside Park, N. J.; Hayes S. Walter, A. G. A., and E. L. Woods, Springfield Gas Light Co., Springfield, Massachusetts.

With these new members, the total number of gas men wearing the "Hall of Flame" pin is now 164.

The formal luncheon was also held on this day of the general session. The Roanoke CBS-TV station filmed a portion of the luncheon for inclusion in its regular evening news telecast.

The guest speaker was Clement D. Johnston, chairman of the board, U. S. Chamber of Commerce and a resident of Roanoke. Mr. Parrott, president of the local gas company, introduced Mr. John-

culture is free."

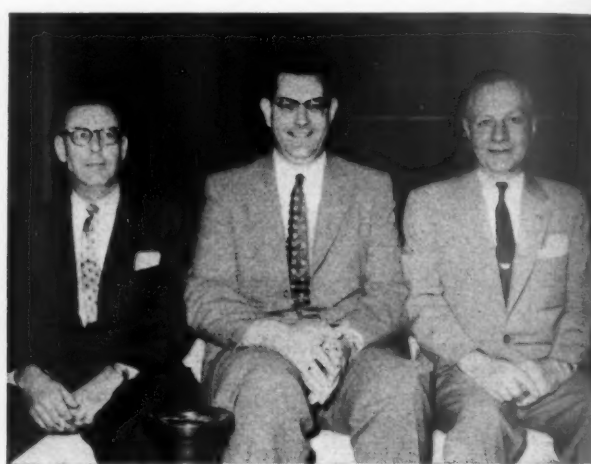
During the afternoon session a diversity of subjects were presented. The progress in industrial and commercial gas research over the past 30 years was reviewed by Don Ellswood, Southern Counties Gas Co., California. In his paper he touched lightly on a few research projects and drew his audience step by step through his analysis of the word research. He showed how the word really meant, reach—search—and sell. Without the last action there can be no progress, he said.

Victor Cole, Carrier Corp., showed a sound slide film on the principles of absorption refrigeration and portrayed the applications of the new Carrier absorption refrigeration units in sizes from 100 tons to 700 tons.

Local gas company advertising as



Oliver Pritchard (l.), Brooklyn Union, spoke on non-ferrous metal melting, and K. N. Hawk, East Ohio, made reappraisal of boiler conversions



Don Ellswood (l.) spoke on research progress, Victor Cole on absorption refrigeration, and E. V. Bowyer (r.) on advertising at the local level

bers who had accumulated the required 25 points for membership during the past year. They were:

Maurice J. Dewey, president, Dewey Gas Furnace Co., Detroit; E. J. Funk, vice-president, The C. M. Kemp Manufacturing Co., Baltimore; Elmer H. Lerch, Rochester (N. Y.) Gas and Electric Corp.; George E. Marble, Michigan Consolidated Gas Co., Detroit; Ove M. Olsen, vice-president, Sellers Engineering Co., Chicago; and Oliver Pritchard, The Brooklyn Union Gas Co., Brooklyn, New York.

Also, J. A. Rockefeller, Public Service Electric & Gas Co., Newark, N. J.; Fred C. Schaefer, American Gas Furnace Co., Elizabeth, N. J.; E. Gilbert Silven, Prov-

idence and recounted the milestones in his active life and his devotion to public service. The theme of Mr. Johnston's address was about the freedoms this country was founded upon and how we are slowly losing those freedoms by depending more and more on our government. He stated that American business is still relatively free but liberties have been lost in the fields of agriculture and labor.

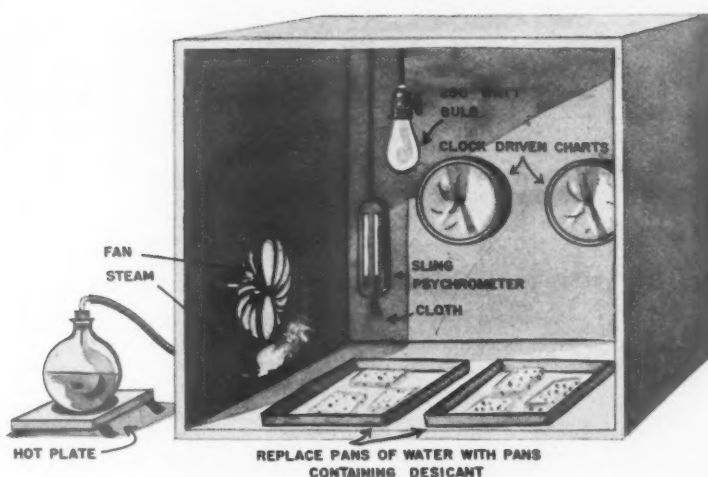
In the field of labor, he said, "the individual can no longer sell his services as he chooses," he is bound by labor union regulation. Agriculture, Mr. Johnston declared, has become "a ward of the federal government. You may feel that federal control of agriculture is desirable, but you certainly can't say agri-

shown and ably described by E. V. Bowyer, Roanoke Gas Co., proved a most interesting presentation. Mr. Bowyer was chairman of the Programs and Papers Committee which arranged the 1956 Conference.

A series of slides was presented by L. J. Fretwell, Oklahoma Natural Gas Co., Tulsa, in starting off Commercial Gas Day.

He showed some of the newer commercial equipment which have larger inputs than any previously made equipment. This new equipment, Mr. Fretwell stated, can now out-perform any competitive appliances. He urged commercial gas men to try their best to have

(Continued on page 51)



Sketch shows essentials of test cabinet for chart humidity tests

Test charts for greater accuracy

By A. M. HUTCHISON

*Superintendent of Gas Measurement
The Ohio Fuel Gas Company*

Through the adoption of a "fact finding" and progressive method of operation by the gas industry, we have come a long way toward attaining the accuracy with which we measure our gas today. As we continue to solve the numerous existing problems, we also find that there always seem to be new problems arising, which hitherto, remained unnoticed or of secondary importance because of the prominence of other factors.

The mere fact that the subject continues to be discussed in publications and at meter schools throughout the country would indicate that we are not fully satisfied with our present day

charts. To put it another way, we feel that some place along the line a more stable chart will be developed.

All large chart manufacturers are continuously striving for better charts—more stable charts. The goal is charts which will be exactly the same size and shape and without any movement in the calibration lines from the time the chart is placed on the meter until after it has been calculated. Better charts have been developed in the past five years.

What makes us want even better charts? Because of larger measurements and higher gas costs we are doing everything possible to eliminate known variables in orifice measurement. This encourages further progress and research. Percentagewise, measurements from transmission lines may not be affected greatly by charts which come and go with relative humidity changes, but the effect is substantial moneywise.

Probably the greatest concern at the moment is the humidity effect on

charts. This seems to be the most elusive problem.

Most of our present day charts are made of paper, but not just any kind of paper. Rigid specifications for chart paper are required by all of our leading chart manufacturers. It has been mainly through these rigid specifications and improvements by chart manufacturers that present day charts have been brought to their high standard.

Much has been done in the past and is being done currently to solve the problem of paper charts. Various types of chart paper impregnated with chemicals such as silicones, sulphides, etc., are being tried. The laminated chart or so-called "Sandwich Chart" with aluminum foil between two pieces of paper was tried 20 years ago and now is again being tried with considerable improvements. Laminated paper charts with a plastic core are also in limited current use. Vinylite and Lucite plastic charts have been proposed. The real answer is apparently still in the future.

Preparation of this article for the A. G. A. MONTHLY was arranged by the Gas Measurement Committee, Operating Section.

Much can be done by the chart user in minimizing the effect of atmospheric conditions on charts. If you like, you can have your own small research equipment. It may not be as accurate as the expensive equipment used by the chart manufacturers, but it can serve a very useful purpose.

At least, with such equipment, you can determine approximately whether or not the charts you are using are up to present day standards. You can also determine just what to expect in the way of deviations from a chart which would otherwise remain absolutely stable.

A paper chart will stretch or contract with changes in relative humidity. Because the cellulose fibers in paper are hygroscopic, they expand or shrink about twice as much in their diameter as they do in their length. Since the paper is never completely dry, it tends to establish a moisture content equal to the ambient humidity.

With excessive moisture changes, it is said that a paper chart may become permanently distorted and never return to its original shape or size regardless of additional moisture changes. (Tests conducted within our company thus far do not establish proof of permanent distortion, under great variations of atmospheric conditions.)

The inking quality of charts is important for good legible records. This desirable feature of charts in turn makes the humidity problem somewhat more difficult to solve. For example, if a paper is extremely hard surfaced, it may take ink at relatively high humidity conditions, but fail to ink at all if the humidity falls appreciably. A very hard finished surface would, of course, have the advantage of deterring changes due to moisture. However, it probably would be detrimental to the pen points, and cause them to wear excessively. If a paper will absorb a minute quantity of ink at a very low relative humidity, it probably will curl or warp at high humidities. As a result, relatively light and soft paper has been recommended for hot and/or dry climatic conditions, and heavier, relatively hard finish paper is recommended for cold and/or humid conditions.

Manufacturers of ink for chart recording purposes attempt to solve this problem for the industry by supplying inks which are designed specifically

for the temperature range to be encountered. For example, they use a slow drying ink for hot climates and a quick drying ink for cold climates.

This may present another problem in relation to the humidity conditions. If a soft finished chart for hot and/or dry climatic conditions is advisable, then a slow drying ink would perhaps "feather" and "blot." Conversely, if a hard finish paper is desirable for cold and/or humid conditions, a quick drying ink would at times not ink at all. To get around these obstacles, the manufacturers attempt to provide charts and ink which will meet the existing conditions the greatest part of the time.

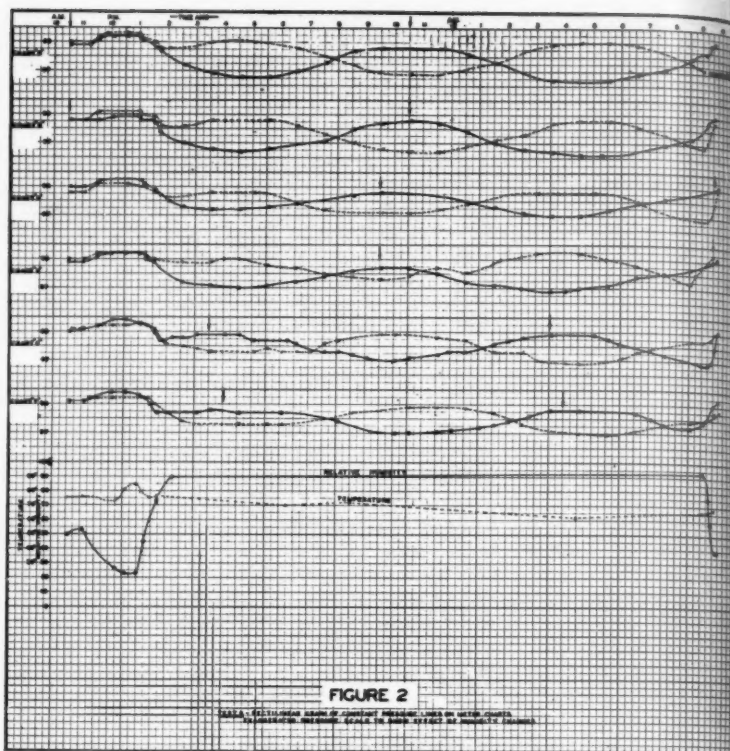
The user of charts can himself check the charts he is buying for humidity effect in an approximate manner with relatively simple equipment. The arrangement of some equipment used by our company is shown in Figure 1. It consists of a panel board fitted with two or more 24 hour clock drives suitably spaced so that charts can be run simultaneously.

Each clock is equipped with four

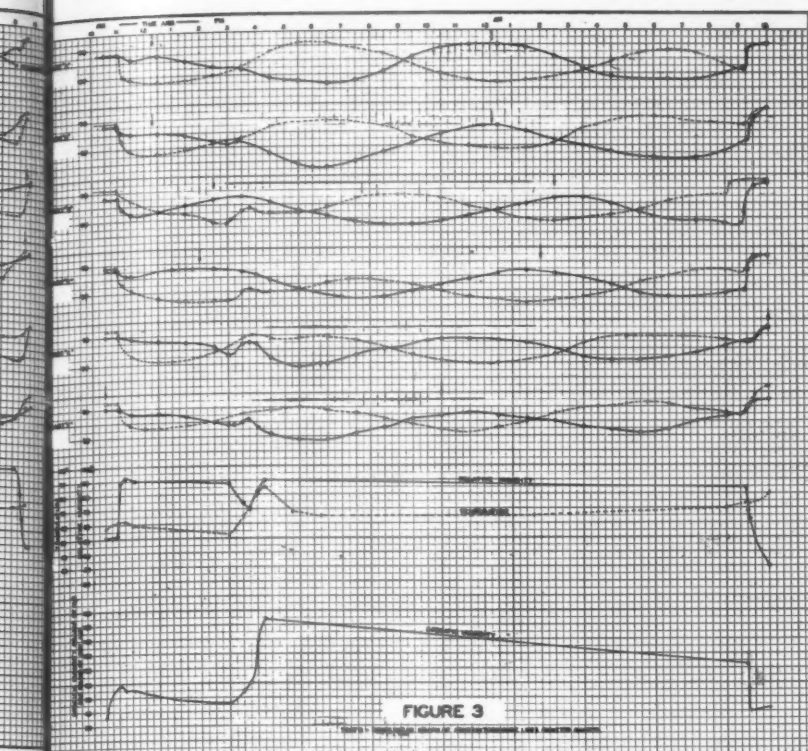
stationary pen arms and pens, three of which may be located approximately on the arc at the 98", 48" and 8" of water lines on a 100" chart. The fourth pen is located approximately 90° from this position at the 92" line. (Other locations may be selected.)

This panel board is placed in a wood and glass cabinet so that atmospheric conditions within can be held fairly constant and measured. Wet and dry bulb temperature readings are taken from a sling type psychrometer hung in the cabinet so that the wet bulb wick is immersed in a beaker of water. Ventilation of the wet bulb may be achieved with a small fan which circulates the air and prevents stratification. Continuous temperature recordings can be made with a temperature recorder.

High humidities may be obtained by the use of sponges in shallow trays filled with water placed in the cabinet and supplemented by introducing small amounts of steam into the enclosure. A reduction in humidity below room level can be obtained by placing a screen container filled with about five



Figures 2 and 3 are representative curves showing results of humidity tests



For detailed explanations of these curves, the reader is referred to text below

pounds of silica gel in the fan's airstream. When desired, high cabinet temperatures can be obtained by means of a 250-watt light bulb located in the cabinet.

With this apparatus, the general testing procedure consists of placing the desired charts on the panel and starting them simultaneously, varying the humidity and temperature in the cabinet in the manner desired and taking wet and dry bulb temperatures, as well as recorder temperature at frequent intervals or whenever significant changes occur. The charts themselves can then be observed after removal from the cabinet by comparing the inked lines with the original fixed line.

Some representative curves showing the results of some of these tests conducted by our company are found in Figures 2 and 3. Top sections of these graphs show the recorded orifice meter chart readings for the outer pens plotted against time. The solid lines represent the readings shown by the pen located on the arc of the chart at approximately 98" and the dotted lines represent the readings shown by the

pen located at a right angle (90°) from this position. However, while the pen set at right angle to the others was set on approximately the 92" line, the record (dotted line) is shown transposed to coincide with the 98" record of the other pen (solid line).

The lower section of these graphs shows the relative humidity, temperature and specific (total) humidity plotted against time.

The test results plotted clearly indicate that at lower humidities, the records of the two pens (one situated at right angles to the other) are very nearly the same. At elevated humidities, the records of the two pens tend to diverge to a maximum, then converge, cross, and diverge again in the opposite direction. This, of course, is due to the effect of relative humidity on the fibers and grain of the paper.

Pertinent results of our tests thus far indicate that maximum changes of 1.2 to 1.5 per cent may be experienced across the grain for relative humidity changes of 20 to 98 per cent. The "cycling" nature of these plots is the result of the different expansion of the

chart paper "across" grain and "with" grain. Evidence also showed that chart change was a function of relative humidity, not specific or total humidity.

Other tests can be run without the equipment described above. However, the temperature and humidity conditions cannot be varied at will and the tests will have to be made at existing humidity and temperature conditions.

In making these tests, measurements of chart changes are determined by vernier calipers modified by having a pin point stylus soldered to the moving slide of the vernier. Strips 1½" wide are cut with the grain and against the grain from the chart to be tested. These strips are then securely clamped at one end to a metal plate by means of a clamping bar so that the distance between the edge of the bar and the 98" line on the chart is about 4 1/16".

Differences in measurements (to .001") made with the calipers between the edge of the bar and the 98" line under varying atmospheric conditions will give the amount of change in the chart due to relative humidity changes. (The 98" line is selected because of its finer readability.) Observations may be converted from linear measurements at various humidities to inches of water and plotted against relative humidity, allowance being made for the distance between chart hub and clamping bar.

Another method of checking charts at existing temperature and humidity conditions could be by the use of a sling psychrometer and observing the changes in chart readings by means of a steel calibration scale.

Our present practice in checking and calibrating the gauges in the field is by using a steel scale on a chart to determine whether or not the calibration lines of the chart are in agreement with those on the steel scale. The same method is also used in checking and calibrating the chart integrators.

By use of some standard such as a steel calibration scale in calibrating both the gauge in the field and the integrator in the office, much of the effect of humidity on charts can be considerably reduced.

There are probably other practical methods of checking the charts which have been successfully used by others. However, the foregoing methods were found to be very useful.

Charts from such instruments as cal-

(Continued on page 53)

Edwin L. Hall

(Continued from page 3)

where he supervised operation of water gas sets. He served in many capacities with UGI and, from 1936 to 1940, he was in charge of the development of a large engineering laboratory in Chester, Pa., as well as supervising the appliance laboratory for UGI.

He joined the Manchester (N. H.) Gas Company as manager and treasurer in 1940. He resigned that position in May, 1945, to join the American Gas Association as secretary-coordinator of the A. G. A. Gas Production on Research Committee. In this capacity, he supervised all gas production research carried on in institutions by the A. G. A. Promotion, Advertising and Research (PAR) Program.

On November 1, 1947, Mr. Hall was appointed director of the Association's Testing Laboratories in Cleveland and Los Angeles, succeeding R. M. Conner, who resigned from active duty as director due to ill health. Mr. Hall was appointed an assistant managing director of the American Gas Association in June, 1950.

Mr. Hall made many valued contributions to the gas industry before and after joining A. G. A. Under his direction, the floor space of the Testing Laboratories was more than tripled. In addition to the many gas production and gas utilization research projects carried on at the Laboratories under the PAR plan, more than 5,600 individual models of gas appliances are tested there annually to ensure that they meet the rigid requirements of safety, dependability and efficiency that are American Standards.

Active in technical associations, Mr. Hall was a life member of the Society of Gas Lighting, an associate of the

Guild of Gas Managers, and a member of the Cleveland Association of Research Directors.

Honorary pallbearers at the funeral service in Cleveland were Dean H. Mitchell, president, A. G. A.; N. B. Ber-tolette, chairman of the Laboratories Managing Committee; Howard B. Noyes, chairman of the A. S. A. Sectional Committee, Project Z 21, and of the A. G. A. Approval Requirements Committee; K. R. Knapp, retired assistant director of the Laboratories; R. M. Conner, Laboratories consultant; W. F. Rockwell, Jr., president, Gas Appliance Manufacturers Association; H. L. Whitelaw, executive vice-president, Gas Appliance Manufacturers Association; Harold Massey, managing director, Gas Appliances Manufacturers Association. Also, C. H. Zachry, A. G. A. first vice-president; A. W. Conover, A. G. A. second vice-president; Vincent T. Miles, A. G. A. treasurer; James F. Daly, A. G. A. assistant treasurer; Chester S. Stackpole, A. G. A. managing director; Kurwin R. Boyes, A. G. A. secretary; John W. West, Jr., A. G. A. assistant managing director; B. A. McCandless, A. G. A. assistant managing director; W. G. Rogers, vice-chairman, A. G. A. Laboratories Managing Committee and president, East Ohio Gas Co.; Stanley H. Hobson, president, George D. Roper Corp., and Thomas E. Cross, chief engineer, gas department, Quebec Hydro-Electric Commission, Montreal, Canada.

Active pallbearers were all from the A. G. A. Laboratories. They were R. V. Myer, assistant director; F. E. Hodgdon, assistant director; C. F. Geltz, chief testing engineer; R. E. Cramer, chief standardization engineer; T. S. Leitch, chief inspection engineer, and E. L. Bangert, controller.

Mr. Hall is survived by his widow, Carol Van Bolt Hall, and two sons, George and Richard Hall.

A.G.A.-Colgate

(Continued from page 16)

contest, had them try a box of AD so they could talk it up to customers. Then it took full-page ads in their local paper, set up window displays, and persuaded local gas appliance dealers and 60 local supermarkets to climb aboard the bandwagon. The company mailed contest entry blanks to all its customers and attracted visitors to its sales room floor.

Metropolitan Utilities District of Omaha, Nebraska, featured the contest via radio, television, floor displays, store windows, full-page newspaper ads, and contest banners on 125 vehicles. The company made available "free AD" gift certificates to be given out by company salesmen and sponsored a style show featuring AD and laundry appliances.

The giant Lone Star Gas Company with offices in 400 towns did things in the usual Texas way—BIG. Home economists, salesmen, and service people distributed thousands of boxes of AD. The company used television, radio, newspapers, local contests, giant floor and win-

dow displays, tied-in with appliance dealers and supermarkets to give Texans one of the best contests ever conducted in their area.

Washington Gas Light Company tied-in with local 5-minute TV shows daily, cooperated with over 300 dealers for displays and supermarket promotions, distributed AD at weekly cooking schools and displayed contest material in the main lobby of its building.

Public Service of New Jersey used daily TV spots following Colgate's national programs, display cards on all public service buses, and wide newspaper advertising. Laundry displays were set up in main offices and branches, and AD was distributed through its cooking schools and house calls by home economists.

Milwaukee Gas Light Company conducted daily demonstrations at the Milwaukee Home Show, attended by over 100,000 people, distributed AD and entry blanks through home service and sales personnel, and set up floor and window displays.

Minneapolis Gas Company started the campaign with newspaper ads in 14 sub-

urban newspapers, set up New Freedom Gas Laundry displays, distributed contest entry blanks and AD through sales and home service personnel.

Philadelphia Gas Works used radio, television and newspaper ads to acquaint local residents with details of the contest, set up New Freedom Gas Laundry displays in its sales rooms and in the lobby of a local theater, distributed 475,000 entry blanks, and set up a special exhibit at the Philadelphia Home Show.

Houston Natural Gas Corporation held laundry quiz shows in neighboring towns, sponsored by civic organizations, set up attractive window and floor displays, distributed thousands of boxes of AD and contest entry blanks and used local papers to advertise the contest.

Comments from sales, promotion and advertising personnel of the participating gas companies indicate their enthusiasm for this kind of all-gas promotion. One salesman summed it up this way:

"It was a wonderful way of getting the public to see gas dryers and water heaters in operation."

Put new built-ins in old kitchens



Boston Gas's display of built-in cooking units is aimed at existing home market, exemplifies approach suggested by Mr. Breckenridge. Other New England gas companies have similar displays

● Considerable interest in the possibilities of built-in sales to the existing home market has been aroused in New England gas companies. The author was invited to present his opinions before a New England Gas Association sales conference. The article below is a somewhat revised and condensed version of his remarks.—Editor.

By D. E. BRECKENRIDGE

*Breckenridge, Inc.
Boston, Massachusetts*

The existing home market with 1,687,000 domestic gas customers represents the greatest sales potential for built-in gas ranges for most New England gas utility companies.

Practically all built-in ranges sold up to now have been installed in the kitchens of new homes or in existing

home kitchens that have been completely remodeled. Very few built-ins have been installed in kitchens of existing homes without a complete kitchen remodeling job. Thus, we are discussing a brand new application of a brand new product in a new market.

The relatively large number of the built-in ranges in new homes, the showing of built-ins in magazine and newspaper illustrations, the use of built-ins in television and the movies are all combining to create an acceptance for this new type of cooking equipment.

Isn't it reasonable to assume that the woman who likes her present home and her present neighborhood has the same desire to enjoy the many advantages and features of a built-in range as does her sister or her cousin who is building a new house?

The built-in is new—and people are

interested in new products. Because of its newness, salesmen will find that the built-in makes interesting conversation to their prospects. Properly presented, the built-in can get a salesman into a lot of homes that he couldn't reach with conventional products.

Many of your customers have ranges 15 to 20 years old that should be replaced with modern equipment. A presentation of the built-in gives these prospects new and compelling reasons for discarding the old range in favor of the very newest design. And when a built-in is installed in a customer's home you can be sure that it will not be replaced with a competitive type range.

A surprising number of people do not realize that built-in ranges are available in gas and further do not know that these have all the modern features such as automatic lighting,

oven clock control plus the major advantages of closed door broiling. Nor do these home-owners know that they, too, can enjoy all of the built-in advantages in their present homes unless and until your salesmen explain how this can be done.

We all know that a built-in range performs exactly the same cooking service as does the conventional, free standing range. However, every built-in range sold for installation in the kitchen of an existing home requires some type of cabinet to house the oven unit. The cooking tops may be installed in the present counter surface or they, too, may require a separate cabinet.

There are three types of cabinets for built-in ranges:

1. Factory-built cabinets specially designed with proper sized openings for various makes of ovens and the proper location of the cutout for controls or air intake for cooking tops in the base cabinet.

2. Carpenter-built cabinets to match the customer's existing cabinets.

3. Cabinets made by the home-owner—the do-it-yourself man.

You utility people do not want to assume any responsibility for the installation of kitchen cabinets of any kind. Yet someone must install the factory-built cabinets when you sell the custom gas range, or provide and install carpenter-built cabinets when you sell the oven and cooking top as separate units.

The only trade qualified to assume complete responsibility for all types of cabinet installations (except a home-owner installation) are the carpenter contractors in your community. These are the men who are interested in all kinds of residential remodeling work such as adding a room or a porch, building a playroom in the basement, and many other interior remodeling jobs. These men are not speculative builders but very often they will build three to ten houses a year, usually on contract.

The first step in organizing to sell gas built-in ranges to the existing home market is to line up contractors to handle the cabinet installations.

Next comes the important question of how to introduce the built-in to your customers. As you consider the steps to take it would be well to remember the following.

1. That the gas built-in range is a brand new product to most of your customers.

2. That a majority of your customers have never seen a gas built-in range.

3. That probably none of your customers have ever been told how they could replace their existing range with a built-in.

It is an old axiom that "You can't sell 'em unless you show 'em." Pictures will help to interest your customers in gas built-in ranges but it is going to be pretty difficult to sell these new units unless and until your prospects can examine the actual ovens and cooking tops that they are being asked to buy.

How should gas built-ins be displayed? Should they be shown on stands or plywood displays? Should they be shown in carpenter-built cabinets or in factory-built cabinets? Should the display consist of two cabinets—one for the oven and one for the cooking tops with a counter—or should the built-ins be part of a complete kitchen display consisting of several wall and base cabinets, sink and refrigerator?

Stress cooking units

Naturally, since we are in the kitchen cabinet business, we would be glad to see a nice kitchen display in every utility showroom. However, the program we are discussing is one in which we concentrate our efforts on selling the gas built-in oven and cooking top as an appliance rather than as part of a complete kitchen.

We want our salesmen and our customers to realize that the built-in units can be installed in an existing home without the necessity of spending two or three thousand dollars for a kitchen remodeling job. When they see built-ins as part of a complete kitchen display they may overlook the fact that they could have the units only.

We have seen both gas and electric built-ins displayed in display stands—some of these look like brick walls, some are painted to resemble cabinets. This type of display permits your salesmen to demonstrate the built-in features and is certainly a step in the right direction and costs considerably less than good cabinets.

We believe that the most effective way to display any make of gas built-in range is in a factory-finished cabinet for the oven and another for the cook-

ing tops with a colorful Formica or stainless steel counter top. And here are some of the reasons:

A display of gas built-in ranges in the utility showroom is just a necessary working tool. It will generate some interest and may possibly lead to some sales. However, the display units will not, by themselves, lead to many sales in the existing home market. Most of your logical prospects—the owners of the better type homes—seldom visit a utility display room except by invitation or after their interest in a particular product has been aroused.

If we are to sell built-ins to the existing home market we must tell home-owners that they can replace their present cooking equipment with the modern built-in. We must emphasize that this can be done without a complete kitchen remodeling job. The most logical way to do this is through newspaper and radio advertising and through the efforts of the utility salesmen and dealers' salesmen.

Quite a number of built-in ranges have been shown on the display floors of several utility companies in New England. We hear a frequent complaint that no sales have been made but we also learn that there has been no advertising of the built-in.

In our opinion, a consistent program of small ads, say one column 6 inches, or two column 6 to 8 inches once or twice a week, can be more effective than a quarter page or a half page once a month. If two makes are on display the ads could be alternated. If there are three makes on display each would be advertised every third week.

The general theme of each ad would be, "Let us show you how you can replace your range with a modern gas built-in in your present kitchen."

Your salesmen could be instructed to carry literature on built-in ranges and to explain the advantages of the built-in on each call. They should urge their customers to visit your display room to see the units on display. It is well to remember that none of your customers have ever been told that they can have a modern built-in gas range in their present kitchen without an expensive kitchen remodeling job.

As you develop prospects from your advertising and through your salesmen's calls, you will call on the contractors you have selected to work with you to assist in determining the best

location for the oven and cooking tops. The contractor will, of course, be prepared to quote on whatever type of cabinets the prospect desires, including installation.

In introducing the built-in range for existing home applications in your territory it would be most helpful if all of your employees from president to the office boy could be given information on built-ins with an explanation of how the installation could be made in their own homes. Please remember that we are introducing a brand new product and it is important to interest as many people as possible in the gas industry to the end that

some may want to install one in their own home.

These are some of the things gas utility companies can do to introduce the built-in range to owners of existing homes. It looks like quite a job—and I would be the first to agree with you that it will take time, effort and the investment of some good American dollars on the part of any gas utility company that recognizes the importance of developing this new market. Those of us who have been selling built-ins for the past three or four years believe that the utility will realize a good return on its investment if it will sell the existing home market.

One of the bright sides of this picture is that we know it will be possible to interest dealers in displaying and selling the gas built-in range as soon as enough installations have been made in a local area to convince dealers of the salability of the product to the existing home market.

I firmly believe that if the utility will display, advertise and promote the sale of built-in ranges to the existing home market for a reasonable length of time that they can then set up a co-operative program that will encourage dealers to get into the business and virtually take over the sale of built-ins in the area.

'Nine Tips' educational safety pamphlet enters second printing

a PAR activity

GAS COMPANIES have over-subscribed the first printing of A. G. A.'s educational safety pamphlet, *Nine Tips on Enjoying Modern Gas Service*, and a second printing is now off the press.

Nine Tips contains common sense pointers to help the public use gas and gas appliances

safely and efficiently. Technical safety information in the publication has been approved by both the National Fire Protection Association and the National Safety Council. The new edition notes that more than 90 million gas appliances are being used by more than 35 million American families (these figures include LP-Gas totals), and that gas causes fewer building fires in home and industry than

other widely used fuels.

Nine Tips is designed for use in company reading racks and for mailing to gas company employees, customers, dealers, civic groups and students. Copies are available from the Public Information Bureau, American Gas Association, 420 Lexington Ave., New York 17, N. Y. Prices range from three cents apiece in small quantities to one cent apiece in bulk.

Mammoth Gas Oven Derby in California gets wide publicity

BILLED as the "World's Largest Baking Contest," a mammoth gas bake-off at the National Orange Show in San Bernardino, Calif., recently was given widespread coverage by Southern California press, radio, and television.

Press photographers and radio-television crews were flown to the event by chartered DC-3 between Burbank and Norton Air Base in San Bernardino, enabling press representatives to fly back to Los Angeles in time to meet their deadlines. A battery of top home economists was also flown in to judge the event.

The flash of photographers' bulbs and the whirr of television movie cameras filled the air in the Orange Show's Ralph Swing Auditorium as 110 finalists baked orange cakes and lemon pies on the largest array of new gas ranges ever gathered together for an event of this type.

Winners of the Gas Oven Derby were Mrs. Jeanne Cheatum, San Bernardino, in the orange cake division, and Mrs. Helen Poland, Colton, in the lemon pie division.

The 110 gas ranges used in the contest were set up overnight on the floor of the giant auditorium, then moved out immediately after the show, a logistics problem that was readily solved by the sponsoring Natural Gas Bureau, a two-company sales activity of Southern Counties and Southern California Gas Companies. The bureau, headed by E. B. Patterson, backed the giant

baking contest in conjunction with Sunkist Growers and the National Orange Show.

During the bake-off, an on-the-floor program of running interviews was handled by Walter C. Prill, of the Southern Counties public relations staff. Contestants were also

interviewed by radio network and TV men.

Manufacturers represented in the line-up of the 110 ranges were Rheem-Wedgewood, O'Keefe and Merritt, Gaffers and Sattler, Maytag, Magic Chef, Western-Holly, and Roper.



"World's Largest Baking Contest," sponsored by Southern Counties and Southern California, is shown in full swing as 110 baking finalists vie for honors for their lemon pies and orange cakes

Berry, Wilson, Carder, head MUA

C OSCAR BERRY, general counsel, Washington Gas Light Co., Washington, D. C., was elected president of the Maryland Utilities Association at the annual business conference held in Baltimore, April 6.

He succeeds George M. Nelson, president, the Eastern Shore Public Service Co., Salisbury, Maryland.

Other officers elected to serve in the ensuing year are: Robert W. Wilson, first vice-presi-

dent, Washington, D. C., vice-president, Potomac Electric Power Co.; Robert C. Carder, second vice-president, Hagerstown, manager, Potomac Edison Co.; Austin E. Penn, treasurer, Baltimore, vice-president, Baltimore Gas and Electric Co.; Robert L. Smith, Frederick, retired employee of Potomac Edison Company.

The association voted to hold the 1956 fall meeting at the Cavalier Club in Virginia Beach, Virginia.

Florida-Georgia Gas Association elects Gaede, Crawford

A H. GAEDE, president, Florida Home Gas Co., DeLand, Fla., was elected chairman of the Florida-Georgia Gas Association at the annual General Management Conference held April 13-14 at Lakeside Inn, Mount Dora, Florida. Paul J. Crawford, Ocala Gas Co., Ocala, Fla., was named secretary-treasurer. About 100 delegates from the two states at-

tended the meeting.

Howard E. Ferris, vice-president, South Atlantic Gas Co., Orlando, was chairman of the Program Committee.

Promotion, sales, and public relations topics dominated the two-day meeting. Highlights of the PAR Promotion and Advertising Program were presented by S. F. Wikstrom,

A. G. A. coordinator. James M. Beall, public information director, A. G. A., spoke on the recently inaugurated PAR Public Information Program. Trends in appliance selling were traced by Paul Kennedy, Servel, Inc.

Other topics included prospects of natural gas for Florida, state policy on utility relocations and rate developments.

National LP-Gas Council inaugurates homemaker service

A S PART of its expanded public relations program, the National LP-Gas Council has inaugurated a Lucy P. Gavin Homemaker Service. Lucille Range, formerly publicity director of the Electric Association in Chicago,

has been appointed director of the newly created department. Miss Range will work with home demonstration agents, home economists, newspaper feature editors and radio program directors to offer latest information

on use of LP-Gas in suburban, rural, and farm homes. The department will also serve as a clearing house for information concerning new features offered on modern gas appliances used with LP-Gas systems.

Carrier holds gas air conditioning school for sales engineers

O NE of the fastest-growing industries in the United States is air conditioning. In the commercial field, office buildings, institutions, apartments and similar locations, new construction usually includes air conditioning. It is estimated that in old office buildings alone, there is a potential of 600 million square feet that must be air conditioned to meet the new construction competition.

On the industrial side of the picture, more and more corporations are investing in plant air conditioning which pays off in better product, increased production, much greater

worker comfort and a sharp reduction in fatigue and the job accident rate. It has been estimated that for every square foot of office space there are 20 square feet of industrial space.

Where does the gas industry fit into this picture?

To answer that question Carrier Corp., one of the leaders in the field, recently conducted a two-day school for gas utility sales engineers on their new gas-powered, absorption-type air conditioning system. The course, conducted at company headquarters in Syracuse, N. Y.,

equipped men of the industry with the necessary techniques for selling and selecting the proper machine for applications where gas is the principal energy source.

Some 30 representatives from 17 major gas utilities covering 11 states attended this two-day workshop. The course of study included such subjects as the "Theory of Air Conditioning," "Theory of Refrigeration Cycle," and the "Theory of the Absorption Cycle."

The program was designed to cover large air conditioning and refrigeration systems for such important markets as multi-story office buildings, department stores, hotels, hospitals.

Where gas boilers are already installed for winter heating or manufacturing purposes, the steam or hot water can be employed to power summer cooling equipment. In addition to the absorption machine, a turbine-driven centrifugal refrigerating unit may be used if high pressure steam is available. Gas may be applied as the heat source to produce the steam or hot fluid on which the absorption machine operates. Chilled water from the cooling device may be used for air conditioning or process cooling requirements.

Special instruction was devoted to operation, service, maintenance, sales features and customer benefits provided by the automatic absorption units which are available in capacities from 100 to 700 tons. The machines have practically no major moving parts and use plain water as a refrigerant. Their lightness in weight and practically vibrationless performance has led the way to installation of central cooling plants on upper floors or roofs of multi-story buildings. Also, their extreme quietness permits wide flexibility in location.



Victor Cole, product specialist for Carrier's new automatic "push-button" absorption refrigerating machine, conducts first of several training schools for gas utility sales engineers. The course was held at the company's Syracuse, N. Y., headquarters, where one of the new machines is installed

New A.G.A. ad campaign stresses modernity of gas appliances

a PAR activity

AWAKENING the housewife to the fact that the modern gas appliance is as different from one mother used, as the streamlined car of today differs from the old Model T Ford, is the basis of PAR's new advertising campaign launched by the American Gas Association. The focus is on the gas range and other gas appliances and shows how, through modern innovations and improvements, they rightfully take their place in the modern home.

The campaign specifically pinpoints the features of these appliances and demonstrates how the modern automatic gas range, refrigerator, etc., have brought "automation" to the home so as to bring about the best results with the least amount of time and effort. The

campaign was prepared by Lennen & Newell.

An intensive study of the market disclosed that many women, when asked about a gas range didn't realize that startling improvements had been made in recent years. To educate them to that fact is one of the main purposes of the new advertising approach.

An example of this is shown by this quotation from one of the new ads.

"Wonderful things have happened to gas ranges! Today, they mind the vegetables . . . time the roast . . . boil, broil, bake, stew or fry to perfection any time and everywhere . . . and require less of your time and concern than any other kind of automatic cooking. Here is truly matchless performance, from automatic burners to ovens that safely turn themselves on and off, even when you're elsewhere. Here is the fastest cooking ever on

all top burners, in oven and broilers, thanks to instant off-on heat that eliminates warm-up and cool-off time. Cleanest cooking, too.

"Whole tops lift up . . . doors and burners are removable . . . so hard-to-reach places wash as easily as a dish. And whatever model you fall in love with, remember, it will cost you less to buy, install and use."

This is factual, realistic and hard-sell copy. It should dispel any prejudice because of any shortcomings mother, or even the present housewife, found in use of a gas appliance.

The present campaign, scheduled for the balance of the year, will appear in color in general weeklies, service and shelter magazines. These ads will show the gas appliances in modern settings to demonstrate how they fit in perfectly with any and all of the latest ideas in home planning.

IGT to hold gas technology refresher courses in summer

THE Institute of Gas Technology has announced dates for its fifth annual Summer Session in Natural Gas Technology, in which the fundamentals of the four major areas of operation will be given in separate three-week refresher courses.

Natural Gas Production and Processing will be presented June 11-29; Natural Gas Dis-

tribution, June 11-29; Natural Gas Transmission, July 9-27; and Natural Gas Fuel Utilization, July 30-Aug. 17.

An individual may enroll in one or more courses, at \$75 per course.

Instruction in the four courses will be at the college senior level, and is designed to familiarize engineers with the current prob-

lems and practices of the gas industry, current research, and up-to-date methods of measurement and computation.

A brochure detailing course contents and an enrollment application form can be obtained from Dr. R. T. Ellington, education program chairman, Institute of Gas Technology, 17 West 34th St., Chicago 16.

Safety, operating, and personnel men attend Ebasco seminar

A GROUP of 23 safety, operating and personnel men, representing companies from the United States and Central and South America, attended the ninth Ebasco Seminar in Public Utility Safety in New York recently. The program was presented by Ebasco Services in cooperation with New York University Center for Safety Education. The two-week

seminar is organized to cover in detail a complete safety program from inception to successful operation. Courses in effective speech, practical psychology and supervisory training, as well as a problem-solving forum were also offered for their value in developing the managerial potential of the men enrolled in the seminar.

Supplementing the lecture and discussion periods were a series of field trips to observe safety programs in operation at Long Island Lighting Company and Consolidated Edison Company of New York; the Army safety and driver training program at Governor's Island; and a demonstration of fire protection equipment at C-O-Two Fire Equipment Company.

Industry men see birth of three-millionth Smith water heater

MANY NATIONAL and regional officials of gas associations met at the A. O. Smith Corporation water heater plant in Kankakee, Ill., to witness the birth of the three-millionth Smith water heater. Officials included Dean Mitchell, president, American Gas Association, and president, Northern Indiana Public Service Co.; C. S. Stackpole, managing director, A. G. A.; and Leigh Whitelaw, executive vice-president, Gas Appliance Manufacturers Association.

At the event, J. H. Brinker, Permaglas division general manager, noted that a combination of dramatic improvement through introduction of the glass-lined tank and aggressive merchandising has enabled U. S. water heater manufacturers to double the number of units in use in the past decade.

To mark the milestone, a Permaglas water heater was offered to parents of every Smith baby born on the day the three-millionth meter came off the line, providing the Smith families submitted authenticated applications stating that they live in owned or rented homes. Sixty-two sets of parents, over 90 per cent of estimated eligibles, won heaters.



Next to three-millionth Smith water heater are (left to right): F. S. Cornell, executive vice-president, A. O. Smith; Leigh Whitelaw, executive vice-president, GAMA; Dean Mitchell, president, A. G. A.; L. B. Smith, president, A. O. Smith; C. S. Stackpole, managing director, A. G. A.

Offer copies of General Management Conference papers

COPIES of papers delivered at the recent General Management Conference held April 4-6 in Chicago are now available from the A.G.A. General Management Section.

Four of the papers are being offered free of charge. They are: "Standardization Subcommittee Report," by P. H. Butler; "Materials Handling Report," by H. E. Dean; "We're Telling the Consumer About Gas," by W. F. Rockwell Jr.; and "Material Handling Facilities" (for use with slides available on

loan from A.G.A. Headquarters), by G. A. Absher.

The remainder of the papers are offered for \$.25. They are: "Cost Control in a Growth Period," by S. M. Campbell; "Natural Gas in Alberta," by G. W. Govier; "Implications of Concentration of Utility Company Stocks in Hands of Institutional Investors," by W. C. Norby; "Prospects and Objectives in Gas Air Conditioning," by L. Ourusoff; "The Deductible Plan Applied to Property Insurance,"

by F. W. Wrenn; "Dynamics in Health Insurance," by E. S. Willis; "Implications of Recent Labor Union Developments," by J. J. Healy.

Also, "Compendium Report—1956," by A. H. Cannon; "Inventory Yardstick," by B. H. Firestone; "Repeating Stock Requisitions," by R. L. Groves; "Why Salvage—Does It Pay?" by R. I. Highgate; and "Stores Expense" (Interim Problems Subcommittee), by C. H. zur Nieden.

Safety booklet of Southern Counties Gas draws keen response

NATIONAL PUBLICITY given Southern Counties Gas Company's program to instruct fire-fighting personnel in its service area on the properties of natural gas has to date brought 125 requests from 28 states in the union and three Canadian provinces for copies of the booklet, *Facts About Natural Gas for the Protective Services*.

An article in the publication, *Firemen*, published by the National Fire Protection

Association, offered copies of the instructional booklet to all who would write Southern Counties requesting it. More than 1,000 copies already have been sent in answer to these requests.

The booklet paraphrases an audio-visual program Southern Counties has been putting on during the past three years for fire fighting agencies, civic and service clubs and school science classes. In that three-year span

the program has been given more than 300 times. Requests for the book have come from fire prevention bureaus and training schools of many large metropolitan fire departments, such as those of Boston and New York.

Also distributed were 1,350 copies of the booklet to members of the American Gas Association, which reported in detail on Southern Counties' program in *Intercom*, A. G. A.'s public relations newsletter.

Teen-agers win gas kitchen, gas laundry, in Cleveland Contest

AS PART of Operation Demonstrate activities in Cleveland, a contest slanted exclusively to the homeowners of tomorrow—the youngsters now in our high schools—was held. It was known as the "Teen-Age Remodeling Contest."

Teen-agers who entered the contest were asked to study the printed floor plan and exterior photos of an existing structure in Cleveland and re-design the house in such a way that a Cleveland contractor, using their plans, could actually remodel the house at a reasonable price.

The contest was announced in the *Cleveland Plain Dealer* and entries poured in. A total of 408 house plans were received.

Judges were William D. Guion, building commissioner of the City of Cleveland; Helen Francisco, president of Francisco Interiors, Inc.; W. Wadsworth Wood, publisher of *Small Homes Guide*; Carl Droppers, assistant professor of architecture, Western Reserve University; and Ray Hunsinger, decorating editor of *Home Modernizing*.

First prize in the contest was a \$3,000 all-gas kitchen by Republic Steel, complete

with everything from built-in Caloric gas range and Servel gas refrigerator to Revere-ware cooking utensils; second prize was a \$1,300 all-gas laundry with Ruud AUI-40 gas water heater, Easy gas dryer, and Calculator gas incinerator; third prize, an RCA-Victor high-fidelity phonograph. There were four fourth prizes of Crosley radios and 20 honorable mention awards of Cleveland Indians baseball tickets.

All of the prizes awarded, including the contents of the kitchen and laundry, were donated.

New gas service center opened to public by Arkansas Western



Striking feature of Arkansas Western's new service center is open-type display panels which highlight modern gas appliances. The panels, designed as separate units with pegboard and wire screen mesh backs, are portable and can be arranged to form backdrops, screens, window display backgrounds

A NEW gas service center which provides a modernistic setting for a galaxy of gas appliances has been completed by the Arkansas Western Gas Co., Fayetteville, Arkansas. Large crowds attending the "open house" had an opportunity to see the latest automatic gas appliances, heating and air conditioning equipment, and commercial cooking equipment merchandised by Arkansas Western. Representatives of 25 firms (gas appliance dealers, master plumbers, and heating contractors) which displayed brand name gas appliances were present to greet visitors. The opening was also attended by several officials from gas appliance manufacturing concerns.

The new service center has a spacious checkered tile floor. Wall panels emphasizing appliances were designed for flexibility, and can be removed for use as backdrops, screens, or window display background.

Arkansas Western awarded a Roper gas clothes dryer as a door prize, in addition to giving away favors with the Blue Flame insignia. After viewing the new center, visitors were conducted on a guided tour of the company's general offices, and were served refreshments in its hospitality room.

Revise pamphlet on A. G. A. membership

THE American Gas Association has recently published a revised version of the pamphlet *Why and How to Become a Member of the American Gas Association*. The 14-page book-

let gives informative pointers on A. G. A. organization, dues, membership requirements, and advantages of individual membership. It is available free of charge from Headquarters.

Consumers' buys plant from Ontario Shore

THE PROPANE air plant and distribution facilities of the Ontario Shore Gas Co.—which serves Oshawa, Whitby and Bowmanville—have been purchased by The Consumers' Gas Company of Toronto. Conversion of the propane air system and customers' appliances to natural gas is planned by the fall of this year, with the natural gas being sup-

plied by a pipeline from Toronto to the Oshawa, Ajax, Whitby, Bowmanville areas. When conversion is completed, at Consumers' Gas Company expense, the more than 1,100 customers of Shore Gas will have the benefits of Consumers' system-wide rates now in effect in metropolitan Toronto, Brampton and Streetsville.

Promotional gas film available from SGA

A PRINT of the Southern Gas Association film, "The Modern Way—Naturally," has been placed in the American Gas Association film library, and is available to gas companies on loan without charge. The film is 16 mm, color, and runs about 20 minutes. The plot is about a young bride who is planning to purchase kitchen equipment. She is persuaded to listen to both gas

and electric sales stories before making her purchase, and finds that by actual demonstration, gas equipment is superior. Prints of the film can be purchased from the Southern Gas Association, 1932 Life of America Building, Dallas 2, Texas. The price, \$225, includes a personalized opening title giving the name of the purchasing company as presenting the film.

Chef's surprise



Hotel William Penn's executive chef is quite astonished at king-sized dimensions of Roper range display. This is third spectacular gas appliance billboard erected by Equitable Gas, Peoples Natural Gas, Manufacturers Light and Heat. Over 103,000 people a day will see it

Utility teaches installation and gas application techniques

A COURSE IN installation and gas application techniques, for gas equipment and appliance dealers and installers is being conducted by the Washington Natural Gas Co., Seattle, Washington.

"We are offering the class in response to numerous requests by household fuel and appliance technicians who foresee a large work load this summer and fall because of the

advent of natural gas," said Charles M. Sturkey, executive vice-president.

The course consists of lectures and workshop demonstrations conducted by Washington Natural specialists and experts from equipment manufacturing firms. A special workshop laboratory is equipped with all types of gas equipment and appliances so that enrollees may practice latest methods. The

course of instruction, including principles of combustion, controls, venting and various gas applications was written by Avery Willis, assistant personnel director, and Harold Monnat, training instructor for Washington Natural.

The laboratory facilities will be used also to instruct Washington Natural Gas Company's employees.

Columbia University plans executive development workshop

WHAT Managers Do and How They Do It—especially from the human relations point of view, will be the theme of the fifth annual Utility Management Workshop, the executive development and training conference operated by the department of industrial and management engineering of Columbia University at Arden House, Harriman, N. Y., July 29 through Aug. 10. Approximately 40

top management executives will work together to solve pertinent problems of modern management posed by the university staff. The participants work in small task force groups applying their own experience and knowledge to the problems set forth. The workshop is under the direction of Prof. Robert Teviot Livingston, author of *The Engineering of Organization & Management*, and

consultant for the Long Island Lighting Company.

The staff consists of experts in the field of group operation, as well as a reading expert and a visual aids consultant. Participation in the workshop is open to nominees from private gas, electric, telephone and pipeline companies, airlines, railroads, and other transportation companies.

A. G. A. announces new publications during April 1956

LISTED BELOW are publications released during the past month, and up to closing time of this issue of the MONTHLY. Information in parentheses indicates the audiences at which each publication is aimed.

ACCOUNTING

• Iowa Type Survivor and Average Remaining Life Tables for Indicated Ages and Average Lives (for accountants). Sponsored by A. G. A.-EEI Depreciation Accounting Committee, and available for \$3 from A. G. A. Headquarters.

LABORATORIES

• Field Study of Non-Primary Aerated Au-

tomatic Pilots for Commercial Gas Cooking Equipment by B. Chandler Shaw (for gas utilities, equipment manufacturers). Research Report No. 1253 was sponsored by the A. G. A. Committee on Industrial and Commercial Gas Research, and is available from A. G. A. Laboratories and Headquarters for \$1.

• Research in Automatic Temperature Controls for Commercial Gas Cooking Equipment by B. Chandler Shaw (for gas utilities, equipment manufacturers). Research Bulletin No. 70 was sponsored by the A. G. A. Committee on Industrial and Commercial Gas Research, and is available from A. G. A. Laboratories and Headquarters for \$1.50.

STATISTICS

• Monthly Bulletin of Utility Gas Sales, March 1956 (for gas companies, financial houses). Sponsored by and available from the Bureau of Statistics; free.

• Employee Accident Experience of the Gas Industry, 1955 (for safety directors). Sponsored by and available from the Bureau of Statistics; free.

• Proved Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas, Dec. 31, 1955 (for gas companies, financial houses, geologists, oil companies). Sponsored by the A. G. A. Natural Gas Reserves Committee and the API Committee on Petroleum Reserves, and available free of charge from the Bureau of Statistics.

Highlights of cases before Federal Power Commission

Bureau of Statistics, American Gas Association

Certificate cases

● **Atlantic Seaboard Corporation:** The FPC has authorized Atlantic Seaboard to construct approximately 86 miles of pipeline in Virginia and West Virginia. The facilities will enable Atlantic Seaboard to overcome, for the greater part, an estimated deficiency of 79.1 million cubic feet of gas on the peak day of the 1956-57 winter. The company indicated that its capacity still would be 8.5 million cubic feet short of meeting the total requirements after the new facilities are built, but that it could curtail industrial load by that amount if a design peak day is encountered. The total cost of the project is \$8.5 million.

● **Colorado Interstate Gas Company:** The company applied to the FPC for authorization to construct a 307-mile 30-inch line from Idalia, in northeastern Colorado, to Beatrice, Nebraska. This large line would be fed by two proposed 26-inch lines. One of the trunk lines would run from Carr, Colorado, near Wyoming to Idalia, a distance of 160 miles. The other would run 75 miles to Idalia from Kit Carson, Colorado. Connecting at Kit Carson would be a proposed 215-mile pipeline from a point just north of Amarillo, Texas. The proposed system would be approximately 800 miles in length and would carry a peak of some 350 million cubic feet of natural gas daily to Beatrice, Nebraska. Colorado Interstate will deliver the gas at Beatrice to the proposed facilities of Natu-

ral Gas Pipeline Company of America, which would carry the fuel into Chicago and the Midwest.

● **Michigan-Wisconsin Pipe Line Company:** The FPC has under consideration an application by Michigan-Wisconsin for authority to construct 424 miles of pipeline extensions and 48 miles of main line loops. The proposal also seeks authority to construct an additional 12,600 in horsepower compressor capacity. Total cost of the project is \$17.6 million. The proposed facilities will enable Michigan-Wisconsin to serve 10 utilities with natural gas for distribution in 41 Wisconsin communities and one in Michigan.

● **New York State Natural Gas Corporation:** The FPC has granted temporary authority to the company to construct a 27-mile extension of a pipeline to connect with a new natural gas field in Clearfield, Jefferson, and Indiana Counties, Pennsylvania. Total estimated cost of the project is \$1.5 million.

● **Pacific Northwest Pipeline Corporation:** The FPC has issued a temporary authorization to Pacific Northwest to construct lateral pipelines in Washington with diameters larger than those originally authorized and to build about 50 miles of new line in Colorado. Pacific Northwest will build its Walla Walla and Yakima-Wenatchee laterals in Washington with diameters

larger than those previously authorized to enable it to meet increased estimated requirements of customers to be served off the two lines. The 50 miles of line in Colorado will be built to enable the company to serve two direct industrial customers, Union Carbide Nuclear Co., at Uraven, Colorado and Vanadium Corporation of America, at Nucla, Colorado. The estimated cost of the proposed facilities is \$2.5 million.

● **Pennsylvania Gas Company:** The company has asked FPC authorization to construct 38 miles of pipeline in Erie and Warren Counties, Penn., and Chautauqua County in New York. The estimated cost of the project is \$930,000. The line would extend from Union City to Fairview, Penn., and would be used to make gas service available to communities along the route, and to enable the delivery of gas into Erie, Penn., from the West as well as the East. The other line would extend from a point in Pittsfield Township to the Jamestown, N. Y., area. It would be used primarily to augment the supply of gas now being furnished to Jamestown.

● **Permian Basin Pipeline Company:** Authorization was received from the FPC by the company to construct 19 miles of 16-inch pipeline and a 6,750 horsepower compressor station to receive and transport gas to be purchased from Phillips Petroleum Company. Estimated cost of the project is \$2.8 million.

Hartford Gas holds kick-off dinner for Matchless campaign



Vice-President William Jebb, Hartford Gas Co., welcomes group of 150 dealers to meeting which launched the area's Matchless Gas Range Campaign. Meeting was held in utility's auditorium

A DINNER attended by 150 dealers launched the Matchless Gas Range Campaign of the Hartford Gas Co., Hartford, Connecticut. Participating in the utility's spring campaign are manufacturers, distributors, department stores, furniture stores, and appliance dealers in the Hartford area.

William Jebb, vice-president of the gas company, welcomed the group and outlined the business development plans of the company. Featured speaker at the dinner was E. Carl Sorby, vice-president, Geo. D. Roper Corporation.

Mr. Sorby pointed out the many new features of modern gas ranges, particularly stressing the benefits of top burner heat control. He explained that the secret of this newest feature is a thermostatically controlled aluminum sensing element in the center of the burner which measures the temperature of food inside the cooking utensil, enabling constant temperature to be maintained automatically.

Douglas Rogers, residential sales manager at Hartford Gas, outlined the company's co-operative policies to promote these new ranges. The utility's sales promotion manager, Don Schively, stated that 10 manufacturers are represented in the Hartford campaign—Bengal, Caloric, Florence, Glenwood, Hardwick, Magic Chef, Norge, RCA-Estate, Roper, and Tappan.

New Jersey plans dispatch center

THE New Jersey Natural Gas Co., Asbury Park, N. J., has announced that it will open a new service center on Route 35, Oakhurst, about May 1. The new facility, which will be a dispatch center for all service calls on customers' appliances and street repairs, will serve more than 40,000 customers in the area

from Eatontown to Point Pleasant and westward to Freehold. The service center will bring together facilities now operated separately in Long Branch and Belmar plants and the Neptune City garage. Other activities of the company in Long Branch and Belmar will continue as at present.

General Controls adds building

GENERAL CONTROLS CO., Glendale, Calif., announces the construction of a new building at 600 Bryant St., San Francisco, that will increase the company's facilities in the area by 120 per cent. Completion is scheduled for May 1. Of modern, functional design, the new showroom and ware-

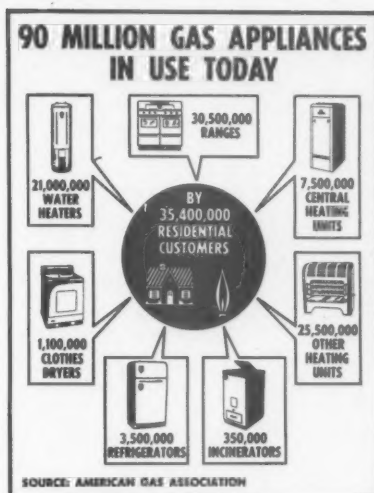
house will encompass 4400 square feet, with office quarters located on a level above the auto driveway. Test facilities will be provided, and service schools and sales meetings will be accommodated in rooms with accordion-type walls that can be adjusted to the size of each group.

Department of Texas Gas moves

THE gas supply department of Texas Gas Transmission Corporation was moved from Shreveport, La., to Houston, Texas, on March 19. New offices are in the Bank of the Southwest building. The move was made in order for the department to be closer to the Louisiana and Texas Gulf Coast areas where Texas Gas purchases major supplies of natural gas. The gas supply department is primarily re-

sponsible for the negotiation of gas purchase contracts, estimate of reserves dedicated to the company and proration of gas. The principal officials in the new Houston offices are W. L. Stanton, vice-president in charge of gas supply, Charles P. Moreton, supervisor of gas contracts, and Monty G. Martin, chief geologist. Texas Gas Exploration Corp., a subsidiary of Texas Gas, also has offices in Houston.

Worth \$16.4 billion



Over 90 million gas appliances with reproduction value of \$16.4 billion are in use in the U.S. today. Of this number, 71.5 million are served by utility gas, the remainder by LP-Gas

Equitable Gas blue flame forecasts weather for Pittsburghers

EQUITABLE Gas Company now has a visual weather flame in the shape of a giant gas flame perched atop its headquarters building in Pittsburgh's Golden Triangle. The indicator tells at a glance what to expect from the weather. To make quick recognition possible, only red and blue colors are used. A steady red flame signals fair weather, while a steady blue flame predicts coming rain. Flashing blue means that snow is on the way.

In the ceremonies dedicating the flame to

community service, Henry Rockwood, Pittsburgh's weather man, threw the switch. A. W. Conover, Equitable president, stated that the signal would be of great service to the people of Pittsburgh and surrounding areas in predicting the weather conditions.

The new addition to Pittsburgh's skyline is built in the form of a 21-foot gas flame and is mounted on a 20-foot steel platform. It forecasts changing weather conditions by color changes taking place within the plastic structure. The 5-ton public service display

utilizes 2,000 feet of gaseous lighting tubing. It was designed, engineered, and manufactured by Federal Sign and Signal Corporation of Chicago.

Mr. Conover stated that the weather signals are operated by remote control from Equitable's pressure office which receives teletype reports direct from the Weather Bureau. Since men are on duty 24 hours a day in the pressure office, Pittsburghers will know what the weather has in store anytime during the day or night.

Teachers see top burner heat control demonstration at PGW

MEMBERS of the Philadelphia Board of Education were guests of the Philadelphia Gas Works at a recent dinner meeting and instructive Matchless cooking demonstration. The group included 150 home economics teachers, with Esther Hill, director of the division of home economics, and Margaret Crozier, director of school cafeterias. Also present were officials of the American Gas Association.

Philadelphia schools were recently equipped with new Matchless gas ranges with top

burner heat control, which keeps cooking utensils at the exact temperature required. The meeting acquainted teachers with the easy operation of cooking on Matchless gas ranges with the sensational "top burner that thinks."

PGW's director of sales, Frank H. Trembly, presided at the dinner meeting, and introduced the speakers. They included Julius Klein, president of the Caloric Appliance Corp.; Miss Hill from the Board of Education; and J. O. Nichols, PGW sales manager.

The presence of Mrs. America 1956—Mrs. Ramona Deitemeyer of Lincoln, Neb.—lent glamor to the occasion. She was accompanied by W. W. Selzer, chairman of the 1957 Mrs. America contest.

Mr. Trembly was narrator for the Matchless cooking demonstration. PGW's home service director, Janet Lappin, guided her experts in cooking the foods. They were the assistant home service director, Patricia Dome, and Sally Bingham, Doris Curran and Patricia Hewson.

Issue corrosion film

A NEW FILM portraying the action of corrosion on steel, and how this action can be prevented or limited, has just been released by the American Zinc Institute. The 35mm sound and color film explains in simple language the way in which zinc functions to control the corrosion of iron and steel by acting as a barrier and by affording galvanic protection. It has been made available for showing, free of charge, before industrial, technical, and education groups.

Transfers office

TRANSFER of Magic Chef's commercial cooking equipment sales and merchandising office from St. Louis to Cleveland, where the company's commercial line is manufactured, has been announced. Tracy B. Madole, product manager of the commercial equipment division, has moved to Cleveland as merchandising manager for this line of Magic Chef products. Magic Chef's principal plants for domestic ranges and space heaters are in St. Louis, and Franklin, Tennessee.

Honor 'Transgas'

ONE of the highest awards in industrial journalism has been presented to *Transgas*, official publication of Transcontinental Gas Pipe Line Corp., Houston, Texas, edited by George Bohot. A panel of judges selected *Transgas* for the Award of Excellence in the second annual Traffic Safety Awards program, sponsored by the American Association of Industrial Editors. The award was won by a series of traffic safety articles in *Transgas* during 1955.

Strong gas industry growth reflected in '55 annual reports

BEST SUMMARY of the 1955 annual reports passing across the editor's desk is contained in the A. G. A. year-end report issued by President Dean H. Mitchell, published in the January A. G. A. MONTHLY, page 3. Annual report data strongly reflect Mr. Mitchell's statement, "The past year was one of the most successful in the history of the gas utility and pipeline industry. During 1955 the industry reached new highs in numbers of customers served with utility gas, in volume of gas sold to ultimate consumers, and in revenues received from the sale of gas." The following is a round-up of the first reports released by companies.

- **Atlanta Gas Light Company** hit new highs in revenues, customers, and construction expenditures in its hundredth year of operation. Revenues were \$37,591,720, customers 284,944 and construction expenditures \$6,949,107, for the fiscal year ended Sept. 30. After operating expenses and taxes amounting to \$34,796,889, net income totaled \$2,086,343.

- **Arizona Public Service Company's** 1955 annual report, printed in the style of a newspaper roto section, announces that gross operating revenues from gas totaled \$10,499,000, up \$1,912,000 from 1954. Gas customers at the year end numbered 135,146, or about 12 per cent more than at the end of 1954. Total gas sales were 158,617,000 therms.

- **Boston Gas Company** sold more gas in 1955 than in any previous year, but earnings were lower than in 1954 because of increased operating costs and the loss of \$700,000 revenue resulting from new reduced rates to customers. Gas revenues were \$25,832,999.

The volume of retail appliances sales by the company and dealers in the area hit a record peak.

- **The Brooklyn Union Gas Company** set a record in firm gas sales, revenues, and net income during 1955. Net income hit \$5,039,000, gas sales \$54,504,000, and appliance sales \$6,023,000. During 1955 Brooklyn Union launched a strong safety program, an all-out publicity and educational attack on obsolete and misused gas appliances.

- **Central Vermont Public Service Corporation** reports 1955 gas operating revenues of \$196,948, about 4 per cent below 1954.

- **Citizens Gas and Coke Utility** states that gas revenues in 1955 were \$10,131,634, as compared with \$8,953,846 in 1954, and \$8,404,831 in 1953. Net operating income was \$4,967,972. Gas sales increased 2.4 billion cubic feet over 1954, for a total of 17.1 billion cubic feet in 1955. About 5,520 new customers were connected, bringing the total to 144,230.

- **Colorado Interstate Gas Company** announces operating revenues for 1955 totaling \$43,693,370, as compared with \$30,137,734 the year before. Net operating income was \$11,267,229, and net income \$9,536,160. Gas sales in 1955 were highest in the history of the company with deliveries of 218,415,864,000 cubic feet, an increase of 13.8 per cent over the previous peak year, 1954.

- **The Columbia Gas System Inc.,** plus subsidiaries, reports that gas sales gained by 12 per cent to 546 billion cubic feet. Total

revenues were \$304,376,000, total expenses \$280,688,000, leaving a net income of \$23,688,000. Net income increased \$4,138,000, and is expected to be greater in coming years partially due to a simplification program under way. This program provides for each distribution unit of the system to operate in one single state, and a single transmission system to operate in the system's entire territory, thus simplifying rate-making procedures and resulting in benefits to stockholders and customers.

- **The Connecticut Light and Power Company** annual report indicates record gas operating revenues totaling \$9,087,706, up five per cent over 1954. Total gas sales of 7.5 billion cubic feet were up 11 per cent, indicating increased customer acceptance of natural gas.

- **Consolidated Edison Company of New York, Inc.,** received \$74,139,000 from gas sales last year, up two per cent over 1954. Conversion to natural gas continued, and provisions were made for increased gas supplies. Sales of gas (33.9 billion cubic feet) were the largest ever. Over 70 per cent of new homes built or committed for construction during 1955 in the utility's territory will use gas for heating. Gas space and water heating installations sold during 1955 numbered 10,675.

- **The Consumers' Gas Company of Toronto** report for the year ended Sept. 30 states that net income amounted to \$964,457, a decrease from the year before, because of lowered revenues and certain increased and non-recurring expenses in connection with the changeover from manufactured gas. The introduction of natural gas and the reduction in rates to a level competitive with other fuels has caused an increase in annual sales volume of 29.4 per cent, or over a billion cubic feet, over 1954 volume based on a comparable natural gas heat content.

- **Consumers Power Company** states that gas revenues were \$59,804,543, up 10.6 per cent, and gas sales totaled 66.7 billion cubic feet. Gas customers at the end of the year numbered 426,714, up 7.9 per cent.

- **The Dayton Power and Light Company** reports a gas operating revenue of \$22,172,000, an increase of \$2,526,000 over 1954. Gas customers increased by 12,383 for a total of 165,391, and sales rose 11.3 per cent to a new high of 33 billion cubic feet. Seven new communities were added to the system, with 136 new miles of gas mains.

- **Delaware Power and Light Company's** gas operating revenues were \$4,515,277, up \$536,055 from 1954. About 2.7 billion cubic feet of gas were sold, and the number of customers was 52,951 at the end of the year.

- **Lone Star Gas Company** and its wholly-owned subsidiary had gas revenues of \$72,

New Haven salesmen know their product



No broth is spoiled in this kitchen as retail salesmen get together to prepare a man-sized dinner with the aid of modern gas equipment after the sales meeting of the New Haven Gas Company. The half-hour sales meeting, which stresses the many advantages of gas cooking, is staged by Charles W. Richardson (shown at right on cake-frosting detail) of the Geo. D. Roper Corporation

359,732, up \$7,820,509 over 1954. The addition of 42,945 new customers gave Lone Star a total of 756,235 customers of all classes.

- **New Jersey Natural Gas Company** announces over-all increases including a 25.8 per cent increase in net income, from \$621,079 to \$781,334. Construction expenditures increased 49.6 per cent, from \$1,416,728 to \$2,118,834, and customers increased to 108,342. Sales volume went up 16 per cent, and operating expenses 10.2 per cent. The utility reports a stepped up promotional program, including a strong advertising campaign and participation for the second year in A. G. A.'s Gas Industry Development Program.

- **Northern Illinois Gas Company** reports 1955 gas operating revenues of \$69,224,000, an increase of 11.6 per cent over the year before. The number of new gas customers (up 9.6 per cent) was 525,369. Over 1.1 million therms of gas were sold.

- **Northern Natural Gas Company's** consolidated operating revenues from gas sales were \$103,696,216, as compared with \$86,381,559 the year before. Net consolidated operating income was up about \$4 million, for a total of \$20,904,492. The number of consumers receiving gas rose by 42,112 to 816,368, about 73 per cent of which were househeating customers. Annual gas sales climbed from 273 to 303 billion cubic feet. The utility's subsidiary, Permian Basin Pipeline Co., reports a net operating income of \$2,531,718.

- **Panhandle Eastern Pipe Line Company** announces total operating expenses of \$98,797,769, and a net income of \$17,396,817. Natural gas sales were the largest in the company's history, amounting to 352 billion cubic feet, an increase of over 10 per cent. Panhandle completed the two-year construction program started in 1954 at a total cost of \$47,860,000, of which \$17,430,000 was spent in 1955.

- **The Peoples Gas Light and Coke Company** and subsidiaries received \$160,699,452 last year—\$144,554,104 of it from the sales of gas. Expenses were \$146,681,022, leaving consolidated net income at \$14,018,430. Expansion of the underground storage facility at Herscher, Ill., was a major factor in enabling the company to serve 29,000 additional space heating customers. Total property, plant, and equipment of the company and its subsidiaries increased by \$22,924,370 to a year-end total of \$559,060,628.

- **Philadelphia Electric Company's** gas operating revenues were \$29,242,605, an increase of \$1,300,898 over the year before. The increase was principally due to new househeating customers. Gas sales totaled 22 billion cubic feet, and customers at the end of the year totaled 205,403.

- **Portland Gas and Coke Company** announces operating revenues of \$9,888,078

Two million safe working hours win award



District 3 employees of Manufacturers Light and Heat Co., Pittsburgh, passed the 2 million man-hour mark without a last-time accident and received their second A. G. A. Safety Merit Award. Shown viewing the award are (l. to r.) O. O. Todd, district manager; A. R. Kelliher, safety director; P. K. Kuzma, manager; P. M. Bollinger, foreman; W. Barbour, district personnel director. District employees were given candy dishes and mechanical pencils as tokens of appreciation.

from the sale of gas, an increase of \$716,123. About 51 million therms of gas were sold to 81,535 customers.

- **Rochester Gas and Electric Corporation** had gas revenues of \$17,879,297, an increase of \$1,735,444 over 1954. Gas customers numbered 142,407, an increase of 3,700. Revenues from gas space heating sales increased 17 per cent over 1954.

- **Rockland Light and Power Company** and subsidiaries, had gas operating revenues of \$4,821,395, up \$656,347. Number of gas customers at the end of 1955 was 33,797. An 18.7 per cent rise in sales of gas brought the total to 3.5 billion cubic feet.

- **San Diego Gas & Electric Company's** annual report shows gas operating revenues at \$15,009,765, up \$1,745,349 over last year, gas sales at 17,334,131,000 cubic feet, and gas customers at 196,597, an increase of 9,620.

- **Southern Union Gas Company** reports in its consolidated statement that operating revenues from gas sales were \$30,666,018 as compared with the previous year's \$26,145,107. Net income for the year was \$4,025,464. The number of customers served, directly and indirectly, was 281,453.

- **South Jersey Gas Company** reports a net income of \$926,011, highest in the company's history. Operating revenues were \$9,135,564, or \$766,338 higher than in 1954. Over 8.2 billion cubic feet of gas were sold.

- **Tennessee Gas Transmission Company** reports operating revenues of \$200,412,614, and net income and special credit of \$30,316,277. Miles of pipeline increased from 8,177 in 1954 to 8,962 in 1955.

- **Texas Eastern Transmission Corporation** reports total revenues from natural gas sales at \$153,170,560 compared with \$150,076,715 in 1954. Consolidated net income was \$16,793,525.

- **Texas Gas Transmission Corporation** reports operating revenues of \$71,134,000, and net income of \$5,722,000, both of which are increases over the previous year. Net additions to property totaled \$20,203,000.

- **Transcontinental Gas Pipe Line Corporation** in its fifth year of operations increased the capacity of the system almost 25 per cent by a major expansion program. Natural gas deliveries amounted to 211 billion cubic feet, and sales reached the highest volume in the company's history. Operating revenues totaled \$74,689,839 and net income totaled \$9,987,027.

- **United Gas Corporation** and subsidiaries announce consolidated revenues from gas operations of \$191,037,728, an increase of about 10 per cent. Consolidated net income was less than in 1954, mainly due to increases in operating expenses, taxes, and depreciation.

- **United Gas Improvement Company's** report shows gas revenues of \$17,524,947, as compared with \$16,643,631 the year before. Over 95 million therms of gas were sold. Gas customers at the end of the period totaled 210,008 for the company and its subsidiaries, excluding the Philadelphia Gas Works.

- **Wisconsin Public Service Corporation** reports gas sales totaling \$5,768,584 up \$341,447 from 1954. Total gas customers reached the 60,910 mark, and sales volume hit 4.5 billion cubic feet.

Frank W. Williams appointed secretary of GID Committee



F. W. Williams

of Directors in 1953 is charged with the responsibility of establishing areas of mutual interest between manufacturers and utilities and between GAMA and A.G.A. Its goal is a united front and plan of action in each field of common interest: advertising and sales promotion; gas appliance servicing policies; public relations and publicity; customer and public safety; and utilization research, appliance development and requirements.

THE APPOINTMENT of Frank W. Williams, secretary of the American Gas Association Residential Gas Section, as secretary of the Gas Industry Development Committee, has been announced by C. S. Stackpole, managing director. This special committee appointed by the A.G.A. Board

The Action Program for Gas Industry Development, as endorsed by the respective boards of A.G.A. and GAMA, has been an important factor in stimulating greater activity by the gas industry. Main targets are upgrading of gas appliances, the expanding of sales and promotional efforts, the increased sale of quality appliances, improved appliance installation and servicing programs, and the development of greater dealer cooperation. The adoption of the Gas Industry Development Program in its entirety through the Demonstration City Program has been an important accomplishment. Based on the successful results of this particular phase of the GID Program, an effort will be made to increase the Demonstration City activity in other areas.

The GID committee is under the direction of J. Theodore Wolfe, executive vice-president, Baltimore Gas and Electric Co., and its membership consists of representative gas utility companies, gas appliance manufacturers, the managing directors of the four regional gas associations and GAMA, and the

chairmen of the Residential Gas, Operating, and Industrial and Commercial Gas Sections and of the General Promotional and General Research Planning Committees. Ex officio members are the president and the two vice-presidents of the Association.

Mr. Williams, who was in charge of the details in connection with the recently completed executive round-table conferences featuring the GID Program, the Demonstration City Program, PAR and its promotional, advertising, research and public information aspects, was formerly associated with The Brooklyn Union Gas Company as new business representative. He has been with the Association for nearly 20 years and has served in various capacities including director of the former Home Appliance Planning Bureau, director of the C/P Ranger Club, assistant secretary and secretary of the Residential Gas Section.

Mr. Williams will continue to serve as secretary of the Residential Gas Section in addition to assuming his new post.

Manufacturers announce new products and promotions

PRODUCTS

● Newest feature on the 1956 line of Gaffers & Sattler (a division of Utility Appliance Corp.) ranges is the "Oven-Sentinel," which automatically times and shuts off oven when a roast is done. This new control was developed by General Controls Co., in cooperation with Gaffers & Sattler engineers. A probe is inserted into the meat, the dial is set to rare, medium, well-done, or any intermediary point, and the oven is turned on. When the roast is done, the oven shuts off automatically. Then a signal light indicates that the meat is ready to serve. The company's new line of ranges also feature a temperature control for the griddle and the extra-large fifth burner beneath the removable griddle. A broiler elevator on the ranges allows shifting to any of ten positions from the top to the bottom of the Char-Glow Hi-Broiler, and converts into an automatic rotisserie in seconds.

● Insul-Pipe a new glass fiber and plastic prefabricated air conditioning duct, is designed to solve the problem of uniform application of thermal insulation and vapor barrier to ducts that pass through attic and crawl space areas. A product of Gustin-Bacon Manufacturing Co., Insul-Pipe has been extensively field tested by The Coleman Company. Tests showed that the self-insulating ducts had less heat loss than metal pipes covered with inch-thick standard blanket insulation, and that conditions which caused moisture to condense on the insulated surfaces of metal ducts had no effect on Insul-Pipe. A sound-treated air supply system is a standard result when Insul-Pipe is utilized. Installation of Insul-Pipe in homes underwritten by FHA is covered by Conditions of Acceptance 83.

● Special features of the new John Wood gas ranges include the Bengal Tailored-Temp

automatic top burner control with built-in thermostat, full extension "filing cabinet" construction broilers and utility drawers, and one-piece main tops that lift off for easy servicing and cleaning. Standard equipment on Bengal's "Mrs. America" model are top burner control, four-hour Melody Chime time reminder, oven light, glass oven door, matchless lighting of all burners, and "CP" construction.

● Sediment can be removed without removing the fat on Super-Chef's Model 14-SF fryer, even while frying is being done. Complete information on this sediment removal feature along with information on other features of Super-Chef's entire line of fryers and matching stainless steel counter cooking units is available from Super-Chef Manufacturing Co., Rt. 3, Box 28, Houston 25, Texas.

● Ruud Manufacturing Company's new multi-coil Model 500A gas water heater is designed for use with an auxiliary storage tank in a variety of commercial and industrial water heating applications where natural, mixed, or manufactured gas is available. It has been approved by A. G. A. Laboratories as a circulating tank water heater, and by Associated Factory Mutual Insurance Companies for use with sprinkler systems to prevent freezing. Model 400A has 460,000 Btu input, and a recovery rating of 387 gallons per hour at 100°F rise. It contains seven horizontal coils formed of 15-gauge copper tubing, all independently removable. Ruud also announces the manufacture of a new, low-price automatic storage gas water heater—the Pace-maker series—with glass-lined tank. Model EP 30-25 has a storage capacity of 30 gallons, a recovery rating of 25 gallons per hour and a one-hour performance rating of 55 gallons; Model EP 40-30 has a storage capacity of 40 gallons, a recovery rating of 30 gallons per hour, and a one-hour performance rating of 70 gallons.

PROMOTIONS

● Customers can now buy a top model, fully automatic, Family Fare range in Magic Chef's 1956 line for one cent more than a conventional CP model. The company feels that with the two types of range standing side by side on a dealer's floor, customers will immediately see the many special advantages in deluxe models—and dealers will be able to upgrade customers' tastes with minimum resistance. The company also has a special profit protection plan for dealers, allowing them to: carry comprehensive space heater stocks, without risk of overstocking; stock up at the beginning of the season to capitalize on early demand; earn additional discounts on greater volume placement; save on shipping allowances because of larger shipments; and minimize the financial burden of end-of-the-season clearing or carry-over. On Dec. 15, 1956, dealers will notify Magic Chef how many space heaters covered by the protection plan remain in stock unsold. Magic Chef will then divide its reserve fund (based on units sold) by the number of unsold units throughout the country, and will pay each eligible dealer a sum of money equal to the unit share of the reserve times the number of heaters he has in stock Dec. 15.

● Ruud's new booklet *The House Without a Heart*, explains the importance of a system providing for sufficient quantities of hot water. The compact booklet with attractive glossy cover gives details on the correct size water heater to fill the individual need.

● Century Engineering Corp., Cedar Rapids, Iowa, is furnishing gas utilities a catalogue of specification sheets on Century gas-fired units. The copies are available from Century under the name "Gas Furnaces, Gas Burners, and Combination Summer-Winter Air Conditioning Units."

Gas Service names Ben Adams Sr. chairman, R. M. Power president



Ben C. Adams Sr.

manager, and Jerry T. Duggan, general counsel, were elected vice-presidents. Re-elected to office were: I. W. McKee, vice-president and treasurer; H. E. Dean, secretary; and R. H. Barker, assistant secretary and assistant treasurer.

Ben C. Adams Sr. was the company's first vice-president and general manager. In 1940, he became president and general manager. A pioneer in the utility business, he started with the Doherty organization 53 years ago, and has spent his entire career with the Doherty

and Cities Service organization until The Gas Service Company was sold to the public in 1954.

He first joined the organization in 1903 as a member of the Madison Gas and Electric Co., a property of the American Light and Traction Company. Three years later he was sent to the Lincoln Gas and Electric Company as general superintendent. In 1909 he became vice-president and general manager. He then worked as vice-president and general manager of the Spokane Gas and Fuel Co., Montgomery Light and Water Power Co., Empire District Electric Co., St. Joseph Railway, Light, Heat and Power Co., Toledo Edison Co., and president of the Community Traction Company.

In 1925 he was sent to Kansas City to organize and to become the directing head of a small group of gas utilities in Missouri, Kansas, and Oklahoma, which were to become The Gas Service Company.

He has been active in gas industry affairs for many years and has served on many committees and as a director of the American Gas Association.

Mr. Power joined the Cities Service organization in 1920 as junior engineer with the Empire Companies. In 1922 he became a valuation engineer for Empire Gas and Fuel Co., remaining in that capacity until 1926 when he joined the Gas Service organization.

Ben C. Adams Jr., general manager, and Jerry T. Duggan, general counsel, were elected vice-presidents. Re-elected to office were: I. W. McKee, vice-president and treasurer; H. E. Dean, secretary; and R. H. Barker, assistant secretary and assistant treasurer.

Ben C. Adams Jr. has spent his entire career in the natural gas industry. He first served the Oklahoma Natural Gas Co., Cities Service Gas Co., and Trunkline Gas Company. In 1950 he joined the Texas Gas Transmission Corp., as vice-president of the gas supply department.

From 1953 to 1955, he was vice-president in charge of all operations of Texas Gas Exploration Corporation. He joined The Gas Service Company in September 1955.

Mr. Duggan has been general counsel for the company since January 1950. Prior to joining The Gas Service Co., he was a lawyer with the firm of Gage, Hillix, and Phelps. He also practiced law in Kansas City with the firm of Hook and Thomas and has served as assistant city counselor of Kansas City, Mo., and regional rationing attorney for the Office of Price Administration.

Gault sales manager

M. B. (BEN) GAULT has been appointed general sales manager of the cooking appliance controls division of Robertshaw-Fulton Controls Company. He succeeds Frank H. Post, who was recently appointed vice-president and general manager of the Robertshaw thermostat division. Mr. Gault's headquarters will be at the executive offices of the company at Greensburg, Pennsylvania. In nearly 20 years' service with the company, Mr. Gault's experience has included production and service training as well as sales work. Since 1954 he has been supervisor of sales of gas appliance controls for cooking applications.

Warsaw retires

THE RETIREMENT of Charles E. Warsaw as vice-president of The United Gas Improvement Company in charge of the Luzerne electric and gas division became effective May 1. He is succeeded by James L. Brownlee, manager of electric distribution and gas department of the Luzerne division. Mr. Warsaw's entire career has been in public utility construction and operation, beginning in 1909 following graduation in electrical engineering at Iowa State College. He has been an active member of the American Gas Association, Edison Electric Institute, Pennsylvania Electric Association, Pennsylvania Gas Association.

Personal
and
otherwise

Portland Gas Light elects Hiller vice-president to succeed Fullerton

JOHN A. HILLER, vice-president, was elected vice-president and general manager of Portland (Maine) Gas Light Company.

Mr. Hiller succeeds Charles D. Fullerton who retired after 47 years of service with the company. During this period Mr. Fullerton served as assistant treasurer, treasurer, and vice-president and general manager. In

addition he has served as a member of the board of directors and clerk of the corporation, and will continue in those capacities. He was a company delegate to the American Gas Association.

Mr. Hiller, a former division manager of the Boston Gas Co., came to Portland in 1940 as sales manager and was appointed

an assistant vice-president in 1951, and vice-president in 1953. Active in association affairs, he has served as a member of the Residential Gas Section of A.G.A., chairman of the sales division of the New England Gas Association, and president of that organization. He is also a member of the Guild of Gas Managers.

Carl Rees and Walter Kussmaul named vice-presidents at NIPSCO

CARL D. REES and Walter H. Kussmaul, Northern Indiana Public Service Company executives, have been named vice-presidents.

Mr. Rees, who has been with the company for more than 25 years, becomes vice-president with a general portfolio of activities including contacts with community officials in the cities and towns in which the company operates. In 1929 Mr. Rees received his degree in civil engineering from Ohio University. He joined Northern Indiana Public Service Company in that year as a cadet engineer, and three years later became superintendent of distribution in the company's Michigan City district.

He was named manager of NIPSCO's Valparaiso district in 1934, a post he held until 1945 when he was appointed manager of the company's Dunes division at Michigan City. Five years later he became manager of NIPSCO's Calumet division in Hammond. In 1952 he was appointed executive assistant to the late E. D. Anderson, executive vice-president of the company.

He is a director of the Indiana Gas Association.

Mr. Kussmaul, a 33-year man at NIPSCO, moves up from general operating superintendent to vice-president in charge of opera-

tions. Immediately following graduation from the Bliss Engineering School of Maryland in 1923, he began his utility career as a cadet engineer with the Calumet Gas and Electric Company, a predecessor of Northern Indiana Public Service Company. In 1929, he was selected to be NIPSCO's general storekeeper, and seven years later was appointed industrial relations manager of the company. In 1949 he became assistant general operating superintendent and seven months later, general operating superintendent. He is a member of the American Gas Association and the Indiana Gas Association.

Central Illinois elects Edwards president, Schlink board chairman



Earl D. Edwards
executive officer. George W. Hathway, administrative vice-president, was named

EARL D. EDWARDS was elected president of Central Illinois Light Co., Peoria, Ill., following the recent annual meeting at which all present directors were re-elected.

Theodore A. Schlink, former president, was elected chairman of the board of directors and chief

executive vice-president and will also be in charge of financial matters. Q. W. Wellington, superintendent of power, was elected vice-president in charge of gas and electric operations.

Mr. Edwards has been associated with the company since February 1923, when he was employed as chief engineer at one of the company's generating stations. He became vice-president in charge of operations in 1951 and was elected a director in 1954. Mr. Edwards is a life member of the American Society of Mechanical Engineers.

Mr. Schlink, who recently celebrated the completion of 50 years of continuous service with the company, has been a director since

1927 at which time he was named secretary-treasurer. He was elected vice-president in 1940 and became president and general manager in 1951.

Mr. Hathway was first employed by the company in 1932 and has served in numerous operating and administrative capacities since that time, including several years as division manager at DeKalb. He was elected vice-president in 1951.

Mr. Wellington has been associated in public utility work since 1927. He joined Central Illinois Light Company in 1936 and has supervised the construction of numerous power facilities. He was named superintendent of power for the company in 1951.

Elect T. J. Hargrave to RG&E board, Leo East to Executive Committee

THOMAS J. HARGRAVE, chairman of the board, Eastman Kodak Company was elected a director of the Rochester Gas and Electric Corp., and Leo H. East, vice-president in charge of operations and a director of Rochester Gas and Electric Corp., was elected a member of the Executive Committee of the utility's board of directors.

Mr. Hargrave has been associated with Eastman Kodak Company since 1927, when he became head of the legal department. He

was made secretary of the company and a director in 1928; vice-president in 1932; president in 1941; and chairman in 1952. He is vice-president of Tennessee Eastman Co., and director of Kodak Limited, London and of Kodak-Pathe, Paris. Mr. Hargrave has been unusually active in many fields, both local and national.

Leo H. East has been actively associated with Rochester Gas and Electric Corporation since his graduation from the University of

Rochester in 1924. He came with the company as an engineer in the gas distribution department. From 1930 until 1942 he was the assistant superintendent of gas distribution. In 1946 he was appointed superintendent of gas distribution; in 1947, general superintendent of the gas department and general manager of gas and engineering operations; and in 1950, vice-president in charge of operations. In 1955 he became a member of the board of directors of Rochester Gas and Electric.

Name Karl King administrative assistant to Vice-President Wilson

KARL K. KING, assistant superintendent of distribution for Manufacturers Light and Heat Co., has been advanced to administrative assistant to Vice-President G. E. Wilson. He will be responsible for coordination of operating department budgets and assist in compiling special reports and studies. He will also

be responsible for the firm's automotive fleet and central repair garages. Mr. King has been associated with Columbia Gas System companies for the past 28 years. He served as an engineer at Columbus, Ohio, and as purchasing agent at Cumberland, Maryland. He joined Manufacturers and its affiliated Pittsburgh

group companies in 1931 as a corrosion engineer. An engineering graduate of Purdue University, Mr. King has been assistant superintendent of distribution since 1947. He is a member of the American Gas Association and the Pennsylvania Natural Gas Men's Association.

Servel announces promotions of Nash, Robinson, Turner, Lateulere

THE APPOINTMENT of E. A. Nash, former appliance merchandising manager of Servel, Inc., as manager of appliance distribution development and the promotion of Robert B. Robinson, Joe C. Turner and John F. Lateulere to new sales positions have been announced.

Mr. Nash, a sales executive for nine years at Chrysler Corporation's Airtemp division in

Dayton, Ohio, before joining Servel last year, will concentrate his attention on strengthening the appliance distributive organization and on securing broader gas utility company participation in a dealer-support plan providing free installation, free service and local financing on Servel gas refrigerators.

Mr. Robinson, formerly marketing research manager, becomes special assistant to the vice-

president of home appliance sales. He has been with Servel since 1947 when he started as a sales research representative.

Mr. Turner, a member of the Servel sales staff since 1952 and most recently a market analyst, succeeds Mr. Robinson as marketing research manager. Mr. Lateulere, who started with Servel 10 years ago as a clerk, becomes manager of sales analysis and control.

Appoint Inskeep

PAUL INSKEEP, who has spent 22 years in the gas industry, has recently been appointed promotional field representative in the upper Midwest area for the American Gas Association. His duties include informing utilities and manufacturers of new promotional campaigns, speaking at regional meetings, and conducting displays at exhibitions. Mr. Inskeep served Detroit Michigan Stove Company from 1939 to 1955, successively as regional manager, commercial sales manager, and director of sales. He has served on various A.G.A. committees, and was chairman of the GAMA National Food Sanitation Committee and a director of the National Association of Food Equipment Manufacturers.

Stauffer president

RALPH D. STAUFFER has been elected president of the NEGEA Service Corp., a subsidiary of New England Gas and Electric Association. Prior to the action of the board of directors, Mr. Stauffer was vice-president and chief engineer, and director of electric operations. The Service Corporation which is one of the seven subsidiary companies of NEGEA, six of which are operating utility companies serving Cambridge, Worcester, New Bedford, Plymouth, Cape Cod and Martha's Vineyard. The Service Corporation is centrally located at Cambridge and provides engineers, technicians and other specialists, as well as central billing, accounting, purchasing, advertising and public relations departments for the entire system.

Smith heads IGT trustees

FRANK C. SMITH, board chairman of the Houston Natural Gas Corporation and former president of American Gas Association, has been elected chairman of the Board of Trustees of the Institute of Gas Technology for 1956. A prime mover in the organization of the Institute, Mr. Smith also served as its first chairman from 1941 to 1944.

Correction

R. I. SNYDER of Southern California Gas Company has been elevated to vice-president, not executive vice-president as was stated in the March A. G. A. MONTHLY. The company does not now have an executive vice-president.

Laclede Gas names Derrick president, Otto chairman of board

ROBERT W. OTTO, president of Laclede Gas Co., St. Louis, has announced that **H. Reid Derrick**, formerly president of the Alabama Gas Corp., will become president of Laclede.

Mr. Otto will become chairman of the board, while continuing as Laclede's chief executive officer.

Mr. Otto first became associated with Laclede in 1932 as general counsel. Elected a vice-president and director in 1942, he became president of the company in 1947, succeeding the late L. Wade Childress.

Mr. Derrick was made president of the Alabama Gas Corporation in 1953, after serving as vice-president in charge of operations

since 1948. His career in the gas industry began after his graduation from Virginia Polytechnic Institute in 1931, when he was employed by the Alabama Gas Corporation. He was successively promoted to distribution superintendent at Tuscaloosa and to the positions of manager of company properties at Tuscaloosa, Gadsden and Montgomery. After serving as a naval lieutenant in World War II, he became vice president and general manager of the Chattanooga Gas Company until 1948, when he rejoined the Alabama Gas Corporation.

Mr. Derrick will continue to serve as a member of the board of directors of the Alabama company.



H. Reid Derrick



R. W. Otto

Elect Puryear president of Alabama Gas to succeed Derrick

DIRECTORS of Alabama Gas Corporation have elected **R. A. Puryear Jr.**, as president to succeed **H. Reid Derrick**, who has resigned to become president of Laclede Gas Company, St. Louis. Mr. Derrick will continue as a director of Alabama Gas. Mr.

Puryear has been executive vice-president of Alabama since 1953.

A native of Selma, Ala., Mr. Puryear began his career with the gas industry in 1930 with Alabama Utilities Service Co., predecessor of Alabama Gas. After managing the

Selma, Anniston and Montgomery properties of the company, he was appointed general manager in 1946 and vice-president in charge of operations in 1947. He was elected executive vice-president and a member of the board of directors in 1953.

Fred Wilson retires from PG&E; Ralph Nabors named as successor

FRED E. WILSON, field superintendent in charge of the "Super Inch" natural gas line since 1950, will retire from his Pacific Gas and Electric Co. (San Francisco, Calif.) position July 1 and will be succeeded by **Ralph S. Nabors**, the northern division superintendent.

By reason of his special awards and committee work in the Pacific Coast Gas Association, Mr. Wilson earned membership in the PCGA's "49er Club," an honor held by only 50 members out of 1,800. He has been a PG&E man since 1922.

In succeeding to the superintendency of

transmission and compression, Mr. Nabors will move from Kettleman compressor station, to "Super Inch" headquarters at Rosedale, near Bakersfield. Mr. Nabors, with PG&E since 1928, has been the northern division superintendent since 1949.

The promotion will result in three other men being advanced in positions. **Harry Prudhomme**, a transmission engineer at Rosedale, will succeed Mr. Nabors. He was in Santa Cruz as assistant gas engineer of the Coast Counties Gas and Electric Company until its merger into PG&E in 1954.

Robert Callow, with PG&E since 1938,

will remain at Rosedale in Mr. Prudhomme's position. Mr. Callow has been the associate transmission engineer, and now will handle maps, records, materials standards and other special tasks.

Richard I. Stark, now an associate engineer in the department of gas operations in San Francisco, will become a transmission engineer at Rosedale. Mr. Stark will continue to handle corrosion work and will have maintenance and operating procedures and design work.

All five men are members of the American Gas Association.

Jesse C. Cross retires as Hope Natural Gas Company vice-president

JESSE C. CROSS, since 1954 a vice-president of Hope Natural Gas Co., Clarksburg, W. Va., will retire May 1, after almost 48 years' service.

He started to work in the oil fields of Wetzel County, W. Va., in 1904, at the age of 13, and first worked for Hope in 1907

as a laborer at Hastings station.

He was made a regular employee in 1911 and, in succession, was promoted to assistant field clerk, field clerk, chief clerk (field office), field accounting supervisor, special duty in charge of inventorying and reclassifying Hope properties, assistant chief ac-

countant (general office), chief accountant, assistant treasurer, treasurer, and vice-president.

Mr. Cross has taken an active part in the affairs of the American Gas Association, and was selected to serve as chairman of the General Accounting Committee for 1948.



C. V. McConnell

former vice-president of the Tappan Stove Company and a member of the board of directors at the time of his death, died March 25 following an extended illness. Having

joined the Tappan Stove Company in 1925 as district sales manager, Mr. McConnell became sales manager in 1927 and vice-president of the firm in charge of sales in 1945. He retired in 1951.

Harry A. Weitzman

manager of the rate and economic research department of Rochester Gas & Electric Corp., died in March at the age of 54. He was a graduate of the University of Michigan, and joined the George B. Cheney Engineering Company immediately following his gradu-

ation. In 1934 he started his service with Rochester Gas & Electric.

Mr. Weitzman had many affiliations with the utility field. He was a member of several committees, including the Rate Committee, of the American Gas Association. He also served on committees of the Edison Electric Institute, and was a member of the American Marketing Association and American Management Association. In 1946 he served as a consultant in the U.S. Civilian Production Administration.

Mr. Weitzman is survived by his wife, Mrs. Rae M. Weitzman, two daughters, and three sisters.

Davidson named operations vice-president, Haverfield promoted



W. H. Davidson

WALTER H. DAVIDSON has been named vice-president for operations of Transcontinental Gas Pipe Line Corp., Houston, Texas.

Before his election Mr. Davidson was vice-president and general superintendent of the pipeline company. F. B.

"Duck" Haverfield, now superintendent of compressor stations, will be the new general superintendent.

Mr. Davidson, an alumnus of Texas A & M, holds a number of honors including the chairmanship in 1955 of the Operating Section of the American Gas Association. He is vice-chairman of the ASA Pressure Piping Code Committee on Gas Transmission and Distribution Piping.

Mr. Davidson started his career 31 years ago as a junior engineer with the Cities Service Company at Bartlesville, Oklahoma. Before joining Fish Constructors in 1949 as

general construction superintendent on the Transco project, Mr. Davidson had been assistant superintendent of operations for the Natural Gas Pipe Line Company of America, Chicago. Mr. Davidson became Transco's superintendent of operations in 1950.

Mr. Haverfield came to the company after 24 years with Continental Oil Company. In 1950 he resigned his position at Conoco as manager of the gasoline division to become Transco's superintendent of compressor stations. He is a member of the American Gas Association.

Northern Natural appoints Pendley purchasing agent, promotes Seaman

NORTHERN NATURAL GAS Co., Omaha, Neb., has announced four recent appointments. Hugh M. Pendley, assistant superintendent of compressor stations for the past eight years, has been named purchasing agent to fill the vacancy left by the death of C. Frank Martin.

Jack W. Seaman will move up to take the place of Mr. Pendley.

In addition, John J. Franks has been appointed director of the newly created data processing section, and F. D. Stockman has joined the gas supply department as staff as-

sistant and chief of services of the company's gas reserves and availability section.

Mr. Pendley, who has worked 20 years at Northern, has had positions in the purchasing, pipeline, engineering, compressor, and distribution departments. He will now be responsible for the purchase of materials and supplies for the transmission system. Mr. Pendley is a member of the American Gas Association.

Mr. Seaman has had 18 years' experience in the compressor department of Northern. His former title was staff assistant, and his duties included assisting in the operation and

maintenance of the department.

Mr. Franks, with five years' service in Northern's accounting department, has been accounting systems supervisor. The new section which he will direct was created to handle the operation of an electronic digital computer recently contracted for by the company. It is expected that the computer will be delivered in about 10 months.

Mr. Stockman was formerly a member of the statistical section of the gas reservoir division of the economics department at Phillips Petroleum Company.

Elect Lewis R. Gaty vice-president of research and development

LEWIS R. GATY has been elected vice-president in charge of research and development of the Philadelphia (Pa.) Electric Company. He will be responsible for research related to the supply of electricity, gas, and steam service, and for the development of new methods, materials, processes, and devices in these fields.

Mr. Gaty has spent his entire business career in the utility industry. After graduating from

Cornell University, he joined Philadelphia Electric as a junior engineer, and later became, successively, electric superintendent, gas superintendent, overhead lines superintendent, assistant to the general superintendent of transmission and distribution, and assistant electric engineer. He was appointed electric engineer in 1945, and since 1948 has been manager of the engineering department.

He is a member of numerous professional

and industry organizations, including the American Gas Association, Pennsylvania Gas Association, American Institute of Chemical Engineers, American Institute of Electrical Engineers, American Society for Engineering Education, American Society of Mechanical Engineers, Association of Edison Illuminating Companies, Edison Electric Institute, Pennsylvania Electric Association, and the National Society of Professional Engineers.

Name Drake manager of rate department, Burnett assistant manager

ROCHESTER (N.Y.) Gas and Electric Corporation has announced the promotion of Francis E. Drake Jr. to manager of the rate and economic research department, and Foster B. Burnett to assistant manager.

Francis Drake was employed in 1937 in the electric distribution engineering depart-

ment as a field engineer. In 1946 he became a technical engineer and in 1949 assistant superintendent in that same department. In 1954 he was promoted to assistant manager of the rate and economic research department. Mr. Drake is a graduate of Columbia University. He is a member of numerous civic

and industrial organizations, including the American Gas Association.

Mr. Burnett graduated from Ohio State University in 1923, came to RG&E in 1930 as an analyst in the rate and economic research department, and was promoted to office supervisor in 1955.

Bartley controller

THE APPOINTMENT of J. H. Bartley as controller of Iowa-Illinois Gas and Electric Co., Davenport, Iowa, has been announced. He replaces C. P. Van Dyke who retired April 1. A veteran of 32 years with the utility, Mr. Bartley started as an addressograph clerk in the Rock Island office. Other positions which he has held include bookkeeper, assistant cashier, credit manager, supervisor of business machines division, local manager in Rock Island, district manager in Ottumwa, and assistant controller. He is a member of the American Gas Association.

Name James Judge

JAMES H. JUDGE has been named assistant to the president, a newly created position at American Meter Co., Philadelphia. He will make his headquarters at the company's new offices at Somerton, Pa., and will be engaged on special projects concerning positive displacement liquid metering. Mr. Judge began his sales career in 1919, with the Mueller Co., and later worked for 27 years with the Neptune Meter Company. In 1951 he joined Rockwell Manufacturing Company as product sales manager, petroleum and industrial liquid division.

Miles joins Leonard

THE F. F. LEONARD CO., Columbus, Ohio, distributor of Ruud gas water heaters, has absorbed the Toledo, Ohio, marketing area of Ruud Manufacturing Co., Kalamazoo, Michigan. Berton Miles, factory sales representative for Ruud in the Toledo area, has joined the Leonard sales organization. Mr. Miles will have headquarters in Columbus. Before entering Ruud sales activity, Mr. Miles was associated with The Ohio Fuel Gas Company. He also was covering Ohio for the incineration division of Bowser, Inc. He has nine years' experience in the gas industry.

Industrial relations

(Continued from page 23)

limit the term 'confidential' so as to embrace only those employees who assist and act in a confidential capacity to persons who formulate, determine and effectuate management policies in the field of labor relations."

In reverting to the old rule, the Board decides to exclude as "confidential" employees from the clerical bargaining unit sought by the Rubber Workers only the secretaries to the personnel manager and office manager at the Goodrich plant. The union now represents the production and maintenance em-

ployees. The firm also wanted excluded from the unit the secretaries to the plant engineer, and those working for the industrial, engineering, purchasing, production, and technical division managers.

Ruling against that request, the Board says: "... there is nothing in the duties of the other management representatives involved which would warrant a finding that they formulate, determine, and effectuate management policies in the field of labor relations."

On the other hand, the secretaries of the personnel manager and the office manager are "confidential." In the first place, the

Board says, the personnel manager acts as the employer's legal officer and, "in addition to representing the employer in the third step of the grievance procedure, participates in the negotiation of bargaining contracts with the petitioner (and) 'if the petitioner is certified herein, he will also bargain with it as to the clerical unit.'" Secondly, the Board goes on, the office manager, "apart from the role he plays in the disposition of grievances of the employees whose work he directs, will assist in the bargaining negotiations with the petitioner if it is certified as a result of the election hereinafter directed."

Sales conference

(Continued from page 30)

their customers upgrade their establishments by installing new and better equipment in order to keep down costs and do a better job in the volume feeding business.

Making the most of what you have was the theme of a most interesting discussion by Edward J. Mayland, president, Gas Magazines, Inc., and publisher of *Cooking for Profit*, which is distributed by many gas utilities. He spoke about gas industry competition and pointed out that the commercial equipment salesman must have adequate tools to work with. Those tools are available and if put to good use, sales will be easier to make.

Another subject which may offer some problems is commercial incineration. More and more it is becoming very expensive to dispose of waste from commercial cooking establishments. B. L.

Landis of Bradmar Sales Co., Inc., Ardmore, Pa., told how his company had developed an incinerator to handle both wet and dry wastes from restaurants, hotels, markets and similar locations which can do an economical job with gas firing. There was a problem of local codes which would have to be worked out in each location, but it was a problem that could be solved.

A speaker who had no problem was William P. Swartz, Jr., a restaurant equipment dealer in Roanoke. He stated that there was a tremendous market for commercial appliances and all he had to do was sell them. He referred to the vast increases in population which meant more schools, more hospitals, more churches. Mr. Swartz stated that he thought the school market was the fastest growing market in his field and that its demands would double during the next ten years. He said he expected to be around and really do a lot of business with the cooperation of the gas com-

panies and manufacturers of equipment.

Hayes S. Walter, A. G. A. commercial cooking representative, wound up the session with a discussion on the competitive situation and how sales could be maintained and increased. He stated that we all should be thinking in positive terms, saying, "It is no easy task to build a complete merchandising package of selling, promotion and advertising that is better than that of our competitors. But it can be done." He concluded, "If we employ those aids to fill in the gaps between our calls (direct mail), our path may not be easy but our progress will be sure."

It was the collective opinion of all who attended the conference that it was one of the best programmed, fastest moving and with one of the best group of speakers. This latter observation was evidenced by the full attendance at all sessions and by the number of questions put to each speaker at the end of each session.

Research conference

(Continued from page 8)

"Competitive Factors in Summer Winter Hook-up, Gas Versus Oil."

George B. Johnson, vice-president, Minneapolis Gas Co., Minneapolis, presided over the session on water heating and general utilization. The speakers and their papers were: Dr. R. C. Weast, associate professor of chemistry, Case Institute of Technology, Cleveland, "A Discussion of Some Factors Which Influence Corrosion of Metals;" Charles C. Lamar, chief engineer, Harper-Wyman Co., Chicago, "Progress in General Utilization Research;" F. P. Ryan, vice-president, M. M. Hedges Manufacturing Co., Chattanooga, Tenn., "The Gas Table Top Water Heater, Its Application and Competition," and

John R. Thomson Sr., product engineer, water heaters, Rheem Manufacturing Co., Chicago, "The 'G' Factor in Water Heaters."

Mr. Lamar spoke at both the water heating and general utilization session and the incineration, cooking and general utilization meeting. He presented a detailed report on the general utilization research projects being carried on.

Otto B. Vogel, superintendent of customers' service, Boston Gas Co., Jamaica Plain, Mass., presided over the session on incineration, cooking and general utilization. Informal discussions were carried on by Charles L. Ruff, executive assistant, Michigan Consolidated Gas Co., Detroit, on the subject of "Servicing and Installation Aspects of Gas Incinerators;" Robert

A. Sloan, supervisor of appliance laboratory, Philadelphia Gas Works Div., U.G.I., Philadelphia, described his company's activities on the "Thermostatic Top Burner Control," and J. G. Bennett, chief design and test engineer, Caloric Appliance Corp., Topton, Pa., gave a paper on "Observations on Low Btu Pilots and Automatic Oven-Broiler Ignition."

Opening the Wednesday morning session, Leon Oursuff, assistant to the senior vice-president, Washington Gas Light Co., Washington, D. C., and chairman of the Committee on Domestic Gas Research, introduced Walter B. Kirk, chief research engineer, A. G. A. Laboratories, Cleveland. Mr. Kirk delivered a technical paper on "Draft Control Methods and Equipment," which he prepared jointly with E. H.

Perry, Jr., A. G. A. Laboratories research engineer.

Following that was a clinic session entitled "Built-in and Combined Versus Separate Gas Appliances." H. P. Morehouse, assistant manager of residential sales, Public Service Electric & Gas Co., Newark, N. J., was the moderator of the panel.

Representing the utilities' viewpoint was Herbert H. McMurray, director of sales, Washington Gas Light Co.; the builder, Milan Kapel, Cleveland, Ohio; the home economist, Miss Mary E. Huck, general home service director, Ohio Fuel Gas Co., Columbus, Ohio, and the manufacturer, Wayne Hendrix, engineer, Cribben & Sexton Co., Chicago.

The clinic speakers discussed the pros and cons of the desirability of the

use of built-ins and combined appliances as against separate units. Each of the speakers presented the viewpoints of his particular field to give a clearer and broader review of the question. A general recommendation of the builder, the home economist and the manufacturer was that built-ins should be standardized to allow simple installation and better home planning for the present and the future.

The Wednesday luncheon speaker was Dr. G. H. McIntyre, vice-president and technical director of the Ferro Corp., Cleveland. His topic was "How to Manage a Research and Development Department." Dr. McIntyre presented a number of logical and usable suggestions on how to operate a research and development department and pointed out its importance in the

success of industrial operations.

E. J. Horton, assistant to the president, Robertshaw-Fulton Controls Co., Greensburg, Pa., and president, Gas Appliance Engineers Society, presided over the last afternoon session of the conference. This was composed of four technical papers which were:

"Service Analyses Asks for Appliance and Controls Redesign," by Paul Kraemer, manager of utilization, Minneapolis Gas Co.; "A Study of Single Port Burners," by K. H. Flint, chief engineer, heating and air conditioning, A. O. Smith Corp., Kankakee, Ill.; "Speeding up the Domestic Gas Water Heater via Research," and "Practical Aspects of Flashback, Blow-off and Yellow-Tipping Research," by Joseph Grumer, chief flame research section, U. S. Bureau of Mines, Pittsburgh.

Facts and figures

(Continued from page 17)

shipped during the same month a year ago.

Housing starts during February totaled 78,000 units, down 13.2 per cent from a year ago when 89,900 units were started. The Department of Labor in their latest report indicated that 96,000 homes were started in March. This is up 23.1 per cent over the previous month, but nevertheless down 15.6 per cent from the 113,800 units begun in March of 1955. On a seasonally adjusted basis home building should be pretty close to 1.2 million units in 1956.

Shipments of 42,500 automatic gas dryers in February matched the shipments made during January and were 49.3 per cent higher than shipments made during February 1955. Electric dryer shipments rose 31.3 per cent to 106,000 units during February. For the first two months of this year automatic gas dryer shipments aggregated 85,000 units of 65.4 per cent above the comparable cumulative period a year ago.

Gas appliance data relate to manufacturers' shipments by the entire industry compiled by the Gas Appliance Manufacturers Association. Industry-wide electric appliance statistics are based on data compiled by the National Electric Manufacturers Association and are reprinted by GAMA in its releases. Data on both gas and electric dryer shipments are released regularly by the American Home Laundry Manufacturers Association.

Total sales of the gas utility and pipe-

line industry to ultimate consumers during February 1956 amounted to 8,113 million therms, an increase of 6.9 per cent over sales of 7,591 million therms in February of last year. The increases in sales were in part attributable to the ever increasing number of new gas customers and the greater consumption per customer as a result of the increase in gas appliance usage.

Sales of gas to industrial users were up approximately 5.7 per cent in the current period over the same month of last year. Industrial production, as measured by the Federal Reserve Board index, was 143 (1947-1949 = 100), up 7.5 per cent over last year. The Association's February index of gas utility and pipeline sales is 231.8 (1947-1949 = 100).

GAS INDUSTRY INCOME STATEMENTS

(MILLIONS OF DOLLARS)

(REFERS TO ALL DISTRIBUTING UTILITIES AND PIPELINE COMPANIES)

TOTAL INDUSTRY

	Twelve Months Ending December 31		Per Cent Change
	1955	1954	
Total operating revenues	\$5,310	\$4,613	+ 15.1
Operating expenses—operations	3,364	2,939	+ 14.5
Operating expenses—maintenance	193	181	+ 6.6
Operating expenses—Total	3,557	3,120	+ 14.0
Depreciation, retirements, depletion, amortization, etc.	363	329	+ 10.3
Federal income and excess profits taxes	427	336	+ 27.1
All other taxes	262	228	+ 14.9
Total taxes	689	564	+ 22.2
Total operating revenue deductions	4,609	4,013	+ 14.9
Net operating revenues	701	600	+ 16.8
Other income	49	50	— 2.0
Gross income	750	650	+ 15.4
Interest on long term debt	200	194	+ 3.1
Other income deductions	17	6	+183.3
Total income deductions	217	200	+ 8.5
Net income	533	450	+ 18.4

QUARTERLY GAS INDUSTRY CONSTRUCTION EXPENDITURES

(MILLIONS OF DOLLARS)

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
1952	\$232	\$257	\$243	\$335	\$1,067
1953	265	346	379	360	1,350
1954	228	300	266	261	1,055
1955	183	274	430	463	1,350p

p Preliminary.

Testing charts

(Continued from page 33)

orimeters, gravimeters, etc., are also effected by high relative humidity conditions but their net effect on measured volumes or revenues are, of course, less than the effect on the office meter chart.

The following is a brief resume of reported present day practices of our leading chart manufacturers in attempting to make the best charts available.

1. Maintaining rigid specifications for chart paper to hold dimensional stability.

2. Proper aging of paper.

3. Accurate printing electro plates, originals to be used, not duplicates, to have accuracy of scale circles within .0002" and concentricities within .003".

4. Center punching within .002".

5. Printing at a controlled temperature and humidity.

6. Proper storage of charts.

The following is a resume of what the chart user might do to improve the stability of the charts after receiving them.

1. Store the finished charts in chart boxes in a stock room of fairly even relative humidity and temperature.

2. Recording charts should be recognized as special paper and not handled the same as office supplies such as stationery. They need special handling.

3. A chart storage control system should be devised whereby the oldest

charts are removed from stock first.

4. Calibration errors between meters and integrators can be practically eliminated by using plastic calibration charts or steel scales for checking each.

5. The use of meter houses which are subjected to outside weather conditions should be discouraged for storage of meter charts.

In addition, know what you can expect from charts, check them periodically, and determine whether or not your particular charts are meeting the best of present day standards.

To determine the relative humidity for test purposes, a psychrometric chart or tables may be used which show air temperature (dry bulb thermometer) versus depression of wet bulb thermometer (dry bulb temperature minus wet bulb temperature). Tables or charts can readily be found in any reliable handbook or textbook.

Definitions

Relative humidity is the value obtained by dividing the mass of moisture actually present in the air by the mass of moisture necessary to saturate the air at that temperature.

Absolute humidity is the mass of water vapor per unit volume in the atmosphere at a given temperature. (Grains per pound of dry air.)

Equations and formulas

Equation for determining specific humidity:

$$G = \frac{5284 (t + 459.6) D_s \times R_h}{P_b - P_v}$$

Where G = grains of H₂O per pound dry air

t = temperature F.^o

D_s = Density of saturated vapor at temp. t (lbs. per cu.ft.)

R_h = Relative humidity

P_b = barometric pressure (inches mercury)

P_v = vapor pressure of water vapor (saturated conditions inches mercury at temperature t)

Example: See Figure 3 (last point on chart). Assume 30" Hg. barometer, temperature 80° F. and relative humidity of 30%.

$$\begin{aligned} \text{Then } G &= \frac{5284 (80 + 459.6) (.001579) (.30)}{30 - 1.032} \\ &= 46.6 \text{ grains} \end{aligned}$$

Equation for percentage change in flow:

$$Q\% = 100 \left(1 - \sqrt{1 + \frac{x}{y}} \right)$$

Example: Find percentage change in flow due to humidity effect.

Assume chart was found to have expanded -.4 inches in 54 inches H₂O differential pressure due to high humidity. Substituting in the above equation:

$$\begin{aligned} Q\% &= 100 \left(1 - \sqrt{1 + \frac{-.4}{54}} \right) \\ &= 100 (1 - .9963) \\ &= 0.37\% \end{aligned}$$

Fair's display

(Continued from page 20)

The food preparation area is a peninsula type work-center which includes a black Formica-topped counter, automatic dishwasher, stainless steel sink and food disposal unit. Above this work-center and suspended from the ceiling is a black iron pot holder from which hang handsome copper pots and pans.

In the planning area are such conveniences as ample desk space, a telephone, clock, and a quantity of cabinets for china, crystal and linen.

New exciting colors, utilitarian cabinets, and a greenhouse window are the dominant features of another of the kitchens. Blueberry, a color originated by House and Garden, is used on the walls.

In this restful scene the designer has

placed a strikingly beautiful conventional gas range, with a birch chopping board conveniently adjacent on one side, and a stainless steel sink, dishwasher and disposal unit in a metal cabinet on the other. Next to this unit is a peninsula base cabinet. Suspended over it is a hanging ribbed-glass cabinet with sliding doors that open from either side to permit access from kitchen or dining room.

On the opposite wall, at the end of another working counter, is the Servel gas refrigerator.

Behind the cooking area is the greenhouse window that brings a garden into the home. Several green plants are arranged along the wide window ledge and just outside the glass are numerous shrubs.

The color combination of one of the kitchens is orange, pink and red. The re-

sult is startlingly beautiful. The floor of pink and gray marbled vinyl tile blends perfectly with the pumpkin-orange Formica-topped counters. These gay colors are a harmonious setting for the striking white gas range with its chrome top and sun tone trim.

To the right of the range stands a deluxe model Servel gas refrigerator. From the left of the range, white metal cabinets make an arc half way around the room and end at a corrugated glass door that leads outside the kitchen. At the center of the cabinets is the sink.

Directly across the kitchen from the range is a laundry room concealed behind cane doors. It includes matching automatic washer and gas clothes dryer and Duo-temp water heater.

The dining area is furnished with a black wrought iron table and four arm

chairs. Cushion fabric of red and white cotton check completes the color combination of orange, pink and red.

In addition to the laundry equipment built into two of the kitchens, there is a streamlined laundry along one wall of the building.

Completing the list of gas appliances to be found at the Natural Gas Building

is a gas-fired Incinerator located outside at the rear of the building.

In every respect the Natural Gas Building proves the point of the current United Gas advertising and sales promotion theme, "the smartest and most modern homes today are natural gas homes."

Remodeling plans for the structure

were drawn by Neild-Somdal-Associates, contractor was W. Murray Werner and landscaping was by Lambert, all of Shreveport. The kitchen designs and interior appointments are by John Hannon, of New York, nationally known designer, whose work has been featured in the nation's leading homemaking magazines.

Hospitality house

(Continued from page 9)

card to Hospitality House.

The kitchen, designed by William

Nimal, features Caloric's built-in oven and counter-top cooking units. Servel's automatic ice-maker unit provides gas refrigeration, while the home laundry section is combined into one appliance—

the Bendix Duomatic gas washer-dryer.

Operation of Hospitality House is under the supervision of Miss Sarah Sicker, South Jersey Gas home economics adviser, assisted by Mrs. Elinor Nixon.

Legal symposium

(Continued from page 9)

utilities, he said. Certificates could be used as means of requiring the producer to become a public utility in order to sell. Courts will be called on to rule on well-head sales. Court decisions already have ruled that sales of gas after gathering come under FPC jurisdiction. Many processes such as sweetening sour gas, compressing low pressure gas, removing hydrates and excessive liquids are preparations for commerce rather than commerce itself, Mr. Jones held.

The operations of producers are not comparable to those of pipeline companies, he said, and producers should not be subjected to the same kind of regulation. Some sort of formula is needed to establish a yardstick for determining a reasonable and just price at which adequate development and exploration will occur. If the supply of natural gas goes short, it will take at least five years to rebuild supplies, he declared.

R. C. Hargrove, counsel for Texas Eastern Transmission Corp., Shreveport, posed some of the regulatory problems facing pipeline companies today. These include problems related to contracts and relationships with producers; problems relating to pipeline certificates, and those relating to pipeline rate proceedings. He reviewed some of the contracts being negotiated or renegotiated, pointing out that the determination of a reasonable price to a producer will be necessary as an integral part of any pipeline rate proceeding.

William C. Chanler, of Winthrop, Stimson, Putman & Roberts, New York, reviewed the Mobile and Sierra court decisions. He stated that the only issue actually decided by the court in these

cases is that a contract to sell gas or electricity at a fixed rate for a term of years is valid and binding. Such a contract can be changed only by agreement of the parties and notice under the Natural Gas Act, or by the FPC after hearing, and if the contract is found to be against the public interest. The decisions held that the commission is a rate-reviewing, not a rate-making body, he said.

James O'Malley, Jr., LeBoeuf, Lamb & Leiby, New York, spoke on the impact of the post-Phillips era on the interest of gas distributors. He outlined the problems of distributors resulting from change from manufactured to natural gas. Many of the economic advantages sought in such conversions were lost through economic limits placed on distributors' rates of return, enabling competitive fuels to undersell gas in some markets. The economic advantages also are hindered by a flood of rate increases sparked by escalation clauses, and the burden on distributors of having to appear, for self-protection, in numerous pipeline and producers' proceedings in rate cases.

Abandonment of service by producers is a critical matter for distributors, and the FPC should take steps to prevent such abandonment, Mr. O'Malley said.

C. S. Stackpole, managing director, A. G. A., told delegates of the rapid growth of the gas industry in the past decade. The use of natural gas, which now supplies about 26 per cent of the nation's energy requirements, is expected to double between today and 1975, he said. But natural gas supplies, estimated at 223 trillion cubic feet today, will be more than substantial to meet even 21 trillion cubic feet a year production 20 years from now. Improved technology, deeper drilling and other advances will bring about higher recovery

of gas from existing formations, he explained. Recent estimates by informed and reliable geologists have placed total reserves of natural gas at 750 to 1,000 trillion cubic feet.

The FPC has no fixed formula for determining the rates of producers, Jerome K. Kuykendall, commission chairman, told the luncheon guests. For the present, at least, the commission will endeavor to take each case as it comes. While the primary purpose of the FPC is to guard the public interest, he declared the interests of producers, pipeliners and distributors, were closely allied with the interest of the general public.

Nelson E. Smith, former member of the FPC presided at the Tuesday morning session. George D. Horning, Jr., counsel for Union Oil Company of California, discussed the recent Panhandle decision, with reference to the necessary proof required of producers. He held that there was no need to introduce cost as a component in trying to find a yardstick to be applied to gas field prices.

The minimum price reached by the commission must be enough to encourage exploration and development. Mr. Horning said he believed that the Harris Bill specified that a fair field price, or a reasonable market price of gas sold under contract, is the yardstick which should be applied.

The problem of pipeline companies in establishing field prices was outlined by James L. White, counsel for Colorado Interstate Gas Company. A major problem is the determination of the commodity value of produced gas, he stated. Many times the term commodity value can be a misnomer. It can mean market value, field price, or other terms. He said he preferred the term "incentive price" as representing the incentive needed to go into the risky enterprise of produc-

tion. In wildcatting, Mr. White said, while the chances of discovering either gas or oil are about 9 to 1, the ratio of actually finding gas is about 1 to 40.

While the problem of a non-producer pipeline is not so great, he believed that incentive is important for a company that does not purchase its gas from an independent or from another pipeline company. Here, the pipeliner had to start production activities and incentive is needed for exploration, and to encourage acquisition and retention of reserves.

William E. Torkelson, chief counsel, Public Service Commission of Wisconsin, represented distributor and consumer interests in the Phillips case before the Supreme Court. He pointed out that the factors effecting local distribution companies are the cost of gas in the field and the cost of transmitting gas to the city gate. The consumer is interested in these costs, and also in the cost incurred by the local company in distributing gas. In the latter factor, there is a conflict between consumer and local companies, and also the fear of the local company of being priced out of the market. These were the reasons for Wisconsin's entry into the Harris Bill fight, he said.

Two basic questions today are: Should there be regulation? If so, what kind of regulation? Mr. Torkelson said there seems to be general acceptance of the view that there must be some regulation of producer prices. The important question is the kind of regulation to be adopted.

He said any delegation of legislative power to the FPC or other agency to regulate rates must not only meet legal requirements but must conform to economic law. It must meet the standard of just and reasonable rates under the present Natural Gas Act, and should conform to the standard of reasonable market price as set forth in the Harris-Fulbright bill.

The session Tuesday afternoon was devoted to discussion of what type of legislation is needed now. C. W. Cooper, vice-president and assistant general counsel, Consolidated Natural Gas Co., New York, spoke for distributors. He stressed the need for arm's length bargaining and competition in arriving at reasonable market prices in the field. David Searls, Houston attorney representing producers' interests, commented on the after effects of the veto of the Harris Bill. It could result in the conservation or retention of natural gas in the

field areas. He said this was not an idle threat on the part of producers. He urged that producers be taken out of the realm of public utilities.

Randall LeBoeuf, New York, speaking in behalf of distribution companies, proposed legislation that would meet the needs of producers, pipeline companies and distributors.

Producers need pricing methods to take care of original cost, depreciation and a return sufficient to encourage exploration and development. Pipeliners are in middle ground. They want the legal consequence of existing contracts established and to pass along or collect added costs. Stabilization is vital to pipeline companies. A new look at the Natural Gas Act, Mr. LeBoeuf declared, should achieve producers' prices through arm's length bargaining but without escalation.

He proposed 11 points that could form the basis of legislation acceptable to all parties concerned. This legislation would (1) maintain legal status of producers, (2) excuse producers from certain burdens of the Act, (3) would require pipelines to file with FPC original contracts with producers, (4) would require adequate notice of filing of changes in rates or other changes to all parties effected thereby, (5) would have certain types of escalator clauses declared by Congress to be of no effect, (6) accept passing on tax clauses, and other similar added costs, (7) rate changes would be proposed by producers and applied by FPC at five year intervals, (8) producers could not abandon services except on cause shown to the Commission, (9) pricing of gas by pipelines or affiliates would be comparable to producers on initial rates, (10) all interested parties have right to intervene at stated periods, and (11) give freedom of decision to FPC in cases where rate fixing is necessary.

He advocated that legislation be proposed along these lines, but not necessarily in this language. Mr. LeBoeuf's proposal met with approval of producer, pipeline and consumer representatives.

Problems of highway improvements were discussed by Austin L. Roberts, NARUC general counsel on Wednesday. C. Oscar Berry, Washington Gas Light Co., told of some of the problems in obtaining leases and rights to construct an artificial underground storage field in areas where no gas wells or oil wells had previously existed.



1956

MAY

- 7-10 • A. G. A. Distribution, Motor Vehicles and Corrosion Conference, Congress Hotel, Chicago, Ill.
- 7-11 • National Restaurant Association Convention and Exposition, Navy Pier, Chicago, Ill. (A. G. A. will exhibit)
- 7-11 • A. G. A. Commercial Gas School, Edgewater Beach Hotel, Chicago, Ill.
- 10-11 • A. G. A. Gas Supply, Transmission and Storage Conference, Conrad Hilton Hotel, Chicago, Ill.
- 16-18 • A. G. A. Chemical, Engineering and Manufactured Gas Production Conference, Benjamin Franklin Hotel, Philadelphia, Pa.
- 22-24 • Pennsylvania Gas Association, Pocono Manor Inn, Pocono Manor, Pa.
- 24-25 • Natural Gas and Petroleum Association of Canada, Sheraton-Brock Hotel, Niagara Falls, Ontario, Can.

JUNE

- 4-7 • Edison Electric Institute, Atlantic City, N. J.
- 17-23 • World Power Conference, Vienna, Austria
- 25-26 • Michigan Gas Association, Grand Hotel, Mackinac Island, Mich.
- 26-29 • Canadian Gas Association, Manior Richelieu, Murray Bay, Quebec, Canada
- 26-29 • American Home Economics Association, Armory, Washington, D. C.

JULY

- 9-13 • National Housewares and Home Appliance Manufacturers Exhibits, Atlantic City, N. J.
- 16-20 • Western Summer Radio-Television and Appliance Market, Western Merchandise Mart, San Francisco, Calif.
- 24-27 • NARUC Annual Convention, Sheraton Palace Hotel, San Francisco, Calif.

SEPTEMBER

- 7 • New Jersey Gas Association, Annual Meeting, Spring Lake, N. J.
- 11-13 • Pacific Coast Gas Association, Annual Meeting, Hotel del Coronado, Coronado, Calif.
- 14-15 • Maryland Utilities Association, Fall Conference, The Cavalier Hotel, Virginia Beach, Va.
- 18-19 • A. G. A. Accident Prevention Conference, Shirley-Savoy Hotel, Denver, Colo.
- 19-21 • Southeastern Gas Association, Hotel Sir Walter, Raleigh, N. C.

Personnel service

SERVICES OFFERED

Executive or Administrative Accountant—progressively broadening experience as: auditor of large combination utility; consultant in Systems and Methods Department of major business and consulting firm; treasurer of gas company. Degree in accounting. Married. Now available. 1836.

Many years of practical experience combined with knowledge of the same, offered: Experiences in natural, LPG and manufactured gases, distribution and utilization; management level desired. 1837.

Executive—present position vice president and general manager of medium size gas utility. Also have held management positions with combination utility. Have reached limit of growth with present company. Qualified for top management with excellent references, training, experience and background. Desire to locate with a company with greater opportunity. 1838.

Graduate engineer, with extensive experience in design, development and production of gas appliances is interested in a connection that can afford the opportunity to make full use of this background. 1839.

Property Manager or Superintendent—ten years' diversified, practical experience in natural gas distribution. Broad knowledge of operations, construction, customers service work, and maintenance. Experienced in administration, sales, and utilization. Desires permanent position with company who will appreciate and recognize performance. 1840.

Communication Engineer & Administrator—B.S. Degree, 22 years' experience in large gas and electric co. Eight years with N. Y. Telephone Co., NYC. Engineering-supervising operation mobile and microwave radio, manual and dial telephone switchboards and customer service boards, supervisory and telemeter equipment and closed circuit TV. Author of papers A. G. A., E.E.I. and Society of Automotive Engineers. Held important chairmanships and

coordinator jobs in national associations, trustee school board ten years. Travel anywhere. 1841.

Public Relations Executive available—well rounded corporation and trade association experience. Versatile, capable of promoting meaningful down-to-earth program. Harvard graduate school. Top references. 1842.

POSITIONS OPEN

Engineers—with natural gas due to arrive soon in Pacific Northwest, Portland Gas & Coke Co. is seeking qualified engineers. Address inquiries to: Personnel Dept., Portland Gas & Coke Co., Public Service Building, Portland, Oregon. 0805.

Assistant Home Service Directors—midwest gas utility seeking two graduate home economists. Former utility experience desirable. Should enjoy working with small groups and public schools. Five day work week—car necessary. Salary and expenses plus other fringe benefits. Submit complete resume. All applications held in strictest confidence. 0806.

Graduate Engineer, Sr.—for design and development of home heating equipment. Must have knowledge of A. G. A. and Underwriters' testing procedures. Permanent position with large Midwest manufacturer of heating and air conditioning equipment. Write giving complete resume and salary requirements. 0808.

Graduate Chemical Engineer—wanted by equipment manufacturer for new applications of gasification apparatus and other equipment. Unusually good opportunity in design, development and new field applications. Location Midwest, salary open. 0809.

Test and Development Engineer—experienced in testing and development of gas fired residential heating equipment. Opening is with expanding Southern California manufacturer of heating and air conditioning equipment. 0811.

Gas Distribution Engineer—excellent opportunity available for man with 3 to 5 years experience in natural gas distribution. Must have degree in mechanical, civil, petroleum or natural gas engineering. Will headquarter in Dallas. Age 25 to 35. We are a natural gas utility company operating in the Southwest. Excellent benefit program. Please give complete resume of qualifications. 0812.

Administrative Vice-President—position carries with it responsibility for the coordination of operating, commercial and accounting functions and also for the administrative aspects of the company's organization and operations. Should have a combination of operating and/or construction and commercial and accounting experience in at least two of the four branches of the utility field. For a responsible, ambitious and aggressive man this is a substantial opportunity with an expanding utility operating company. Salary range—\$15-25,000. Age bracket, 38-45. 0813.

Assistant Vice-President-Operations—a man who is thoroughly familiar with the public utility field, including operations, engineering and construction pertaining to such work. He should have sufficient experience and knowledge of rates to enable him to play a major role in analyzing present rates, supervise in the making of studies for new rates, and participate as a key witness in the preparation of rate cases for Public Utility Commissions. Must be able to handle labor, labor contracts and negotiations and evaluate manpower requirements of individual property operation. He must therefore be equipped constructively to criticize and improve personnel organization. (32-38) Salary range \$10-12,000. 0814.

Graduate Mechanical Engineer—knowledge of standard testing procedures of A. G. A. for gas heating equipment—furnaces, unit heaters, room heaters. Knowledge of manufacturing techniques will be helpful. Position with midwest manufacturer. Write giving complete resume, and salary requirements. 0815.

General management

(Continued from page 12)

He said that there was "no labor movement" in evidence in the United States such as existed in Great Britain and other nations. Rather there were some 150 separate internal unions, each with a separate "movement." He predicted little danger of a third political party in the U.S. with a labor

party. Union officials preferred the opportunity of criticizing present parties to taking the initiative and establishing responsibilities of a third party.

At an afternoon session sponsored by the Competitive Services, Corporate Secretaries, Economics and Rate Committees, delegates were posted on types of information desired by investors of all types. William C. Norby, vice-president, Harris Trust & Savings Bank,

Chicago, told of the points sought by institutional investors in utility stocks. Utility stocks were more highly concentrated in portfolios of institutional investors than industrial stocks, he said. This produced a new type of market, and different approaches in communications. Oral presentations of information often proved more effective to institutional investors, he stated.

Accounting

(Continued from page 27)

Wednesday were the general accounting meeting, with Messrs. Laing and Plourde presiding; internal auditing, under Messrs. Mullen and Ganser; and property accounting with Messrs. Dixon and Romeiser, as chairmen. Also meeting again on Wednesday was the taxation accounting group under Mr. Lonon and Mr. Hobson.

The final session of the conference was a luncheon and afternoon session on electronic accounting machine developments. Ralph F. McGlone, The East Ohio Gas Co., and Walter Ott, The Cincinnati Gas and Electric Co., presided at the luncheon meeting where Bernard S. Rodey, Jr., Consolidated Edison Company of New York, reported on the progress of the research into electronics being conducted on behalf of both accounting committees at Harvard

University. In the afternoon Mr. McGlone and Mr. Ott were moderators at a panel discussion devoted to the 1956 viewpoint on electronics.

On Tuesday evening more than 1,100 delegates and wives attended the annual conference dinner and entertainment at the ballroom of the Hotel Commodore. The next annual conference of the electric and gas utility accountants is scheduled for Washington, D. C., at the Sheraton-Park Hotel, April 8-10, 1957.

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